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ABSTRACT

The document is designed to aid junior and senior high school teachers develop and implement economic education programs. Particular emphasis is placed on the role of money, banking, and the Federal Reserve System in the American economic system. The document is presented in six sections. Section I focuses on functions and forms of money. Section II explains services and functions of commercial banks, including security for deposits, loans for individuals and businesses, and transfer of money payments. Section III discusses purposes, functions, and organization of the Federal Reserve System. Section IV explains the check clearing activities of the Federal Reserve Bank. Section V investigates how commercial banks create money. The final section examines how monetary and fiscal policies work. For each section, information is presented on generalizations related to the topic, activities, objectives, teaching strategies, materials needed, time required, readings, and reference materials. Activities involve students in role playing, writing checks, answering review questions, class discussion, brainstorming, reading and analyzing selected assignments, filling in worksheets, and viewing filmstrips. (DB)

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MONEY, BANKING, AND THE FEDERAL RESERVE SYSTEM. INSTRUCTOR'S GUIDE AND SECTIONS I THROUGH VI.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Federal Reserve Bank of Minneapolis, Minn.

1978

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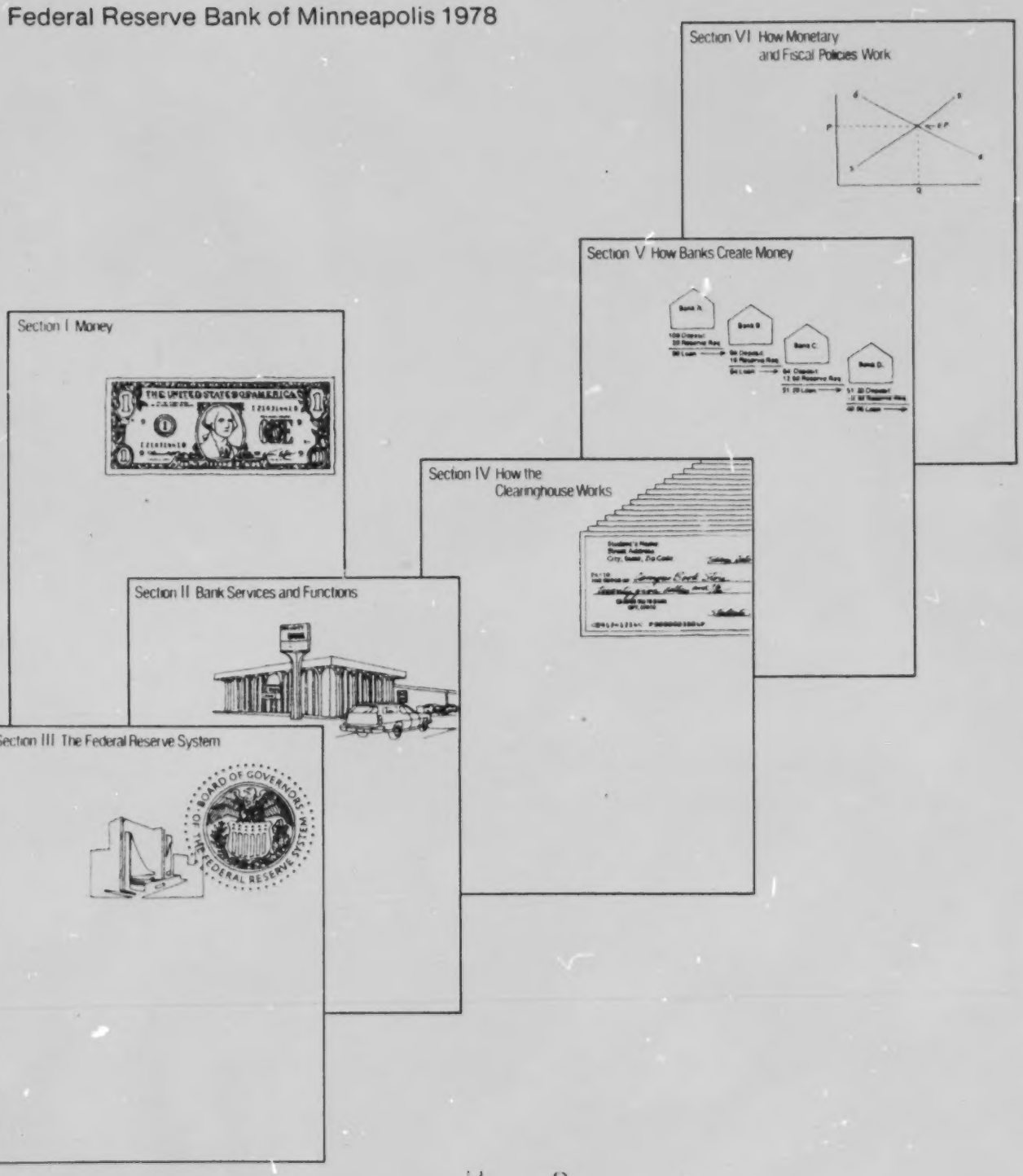
Money, Banking and The Federal Reserve System

Instructor's Guide

Federal Reserve Bank of Minneapolis 1978


Section VI How Monetary and Fiscal Policies Work
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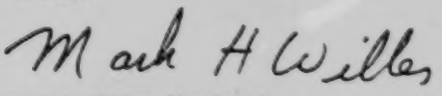
Foreword

The concepts of money and the financial system are frequently difficult for teachers to teach and students to learn. Therefore, we are pleased to participate in the publication of *Money, Banking, and the Federal Reserve System* because we feel it provides useful guidelines and important methodology for teaching these concepts at the junior or senior high level.

This instructional unit is the result of cooperative efforts among educators and individuals interested in developing materials for economic education. We appreciate the opportunity to share the results of these efforts, and we hope teachers and students alike will find *Money, Banking, and the Federal Reserve System* to be an important new instructional resource.



Mark H. Willes, President
Federal Reserve Bank of Minneapolis

Acknowledgments

Money, Banking, and the Federal Reserve System is based on materials that were designed, developed, and classroom-tested by teachers in the social studies department at Hosterman Junior High School in Robbinsdale, Minnesota. These teachers, in particular Bruce Jasper and Robert Reinke, deserve credit for their extensive involvement in the various stages of the creation of these materials.

After being tested in the classroom, these materials were submitted to two awards programs for innovative economic educators. At the national level, the materials placed first in the junior high division of the 1977 awards program sponsored by the International Paper Company Foundation and the Joint Council on Economic Education. They also placed first in the 1977 Minnesota awards program, which was sponsored by the General Mills Foundation and the Minnesota State Council on Economic Education. The Federal Reserve Bank of Minneapolis thanks the sponsors of these awards programs for kindly allowing publication of materials submitted to them.

Money, Banking, and The Federal Reserve System

Introduction to

Many educators consider the role of money, banking, and the Federal Reserve System in promoting an efficient and healthy economic system to be a most difficult topic to teach. This unit is designed to provide a structure or mechanism for teaching those topics to junior and senior high school students in a way that is both conceptually sound and interesting.

Concepts and relationships in the unit are sequentially developed from the concrete to the abstract. Where necessary, complex ideas have been simplified without distorting their basic validity. After basic concepts and relationships have been taught, activities are provided to help students apply the knowledge to real-life situations.

The unit does not attempt to turn students into working economists. The ultimate goal of the unit is to develop basic literacy about money and banking and the operations and policy-making role of the Federal Reserve System.

Money, Banking, and the Federal Reserve System is a self-contained — but flexible — instructional package. The instructional strategies are designed to supplement and enrich textbook materials available to most instructors.

Materials for each of six topical sections are contained in individual folders. This format allows instructors to choose the appropriate sections and appropriate activities from each section, based on the expected student outcomes listed for each activity.

The six sections contained in *Money, Banking, and the Federal Reserve System* are:

I. Money
II. Bank Services and Functions
III. The Federal Reserve System
IV. How the Clearinghouse Works
V. How Banks Create Money
VI. How Monetary and Fiscal Policies Work

Each section contains a brief overview of content and the economic generalizations that are taught by the activities of the section. Following the introductory material are the activity descriptions. For each activity, the following items are included:

- student outcomes
- the strategy or strategies used
- the probable class time required
- a list of materials needed
- complete instructions on how the activity can be conducted

The loose sheets inside the section folders are activity sheets (readings, worksheets, etc.) to be duplicated for student use and masters for making overhead transparencies.

It must be noted that no one teaching strategy is used exclusively: various classroom environments can be developed by the teacher on a daily basis. Teachers may adapt, delete, or add to any activity to better suit their individual teaching styles or the needs of their students.

Due to the vast differences which exist in classrooms and among schools, the unit has been structured to apply to a wide range of abilities and age levels. The progression of activities—from the basic topics of money and banking to the more difficult subject of Federal Reserve monetary policy—allows for placement flexibility. At the junior high level, or with high school students of lesser ability, the instructor could choose to utilize only the materials on money and banking—omitting or modifying the activities that deal with the more abstract topics of Federal Reserve monetary policy or the attainment of national economic goals. With high-ability junior high students or senior high students, the instructor could choose to omit or limit the simpler activities about banking and money. Because of its abstract nature, Section VI is suggested for use only in senior high school and enriched junior high school classrooms.

How to Use *Money, Banking, and The Federal Reserve System*

Choosing Sections:
The study unit has been designed so you can readily determine what particular sections will be appropriate for use with your students. Each section begins with a brief summary of its contents and a list of the generalizations it teaches. Scan through the various activity descriptions for each section, noting especially the student outcomes and the strategies used. This should give you a good idea of what the section covers and whether it is of value to you.

Activity Selection:
After you have chosen appropriate sections, read the descriptions of the activities for those sections. Student "outcomes" summarize the objective of each activity. The same concept is often taught in more than one activity, using different strategies. Use one strategy or several to teach a concept, depending on the needs of your students. Look over the relevant activity sheets and transparencies to familiarize yourself with the strategies.

Teacher Preparation:
When you have made your selection of activities, determine if any of them require additional materials (filmstrips, films, or pamphlets). Refer to "Additional Materials" on page 10 of the Instructor's Guide for information on ordering these materials.

Prior to teaching any activity, assemble the needed materials. This may include additional materials, audio-visual equipment, ordinary classroom supplies, duplicated activity sheets, or overhead transparencies. The activity description is intended to provide you with sufficient background information and instructions to teach the activity. However, student readings and activity sheets provide additional preparatory information. To avoid procedural problems, simulation activities should be reviewed carefully and run through before use within the classroom. You may refer to "Unit Concepts and Definitions" in the Instructor's Guide to clarify terms used in the activity. Or you may refer to "What Economic Educators Should Know," also in the Instructor's Guide, for definitions of essential economic concepts that are not specifically mentioned in the student activities.

To assist you in teaching Activities 6 and 7 in Section VI, a supplemental reading on "Rational Expectations" is included. For additional information on other subjects and for additional teaching materials, see the list of "Reference Materials" in the Instructor's Guide.

Student Evaluation:
Each section contains activities requiring written work from the student (e.g., application lessons, worksheets, discussion questions, etc.) that an instructor may wish to use for grading purposes. Students could be required to keep a folder or notebook of all their completed activity sheets, notes, and review questions. This could be graded upon completion of the unit. An answer key is included in the Instructor's Guide with answers to activity questions and review questions. Participation in group activities and discussions should also be observed and noted.

"Review Questions" are the last activity sheet(s) for each section. These can be duplicated and administered to students or used as a basis for a teacher-made evaluation instrument. The questions may also be used as a pre-test to determine student knowledge of money, banking, and the Federal Reserve System and to select appropriate sections. Pre-test scores can be compared with post-test scores to assess student learning.

Money, Banking, and The Federal Reserve System

Visual Overview

Section I — Money

Generalizations:

- Money is anything that is acceptable in exchange for goods and services.
- Money represents a tool of a modern and complex economic system.
- Money can take any form as long as it is accepted as (1) a medium of exchange, (2) a store of value, and (3) a measure of value.
- In a modern economic system, money should be (1) easily transported, (2) divisible, (3) stable in value, and (4) difficult to reproduce.
- Modern types of money are coin, currency, and checks, but financial transactions can also be made without money, by means of credit cards or electronic funds transfer.

Activity 1 Exchange Escapade
Discussion/Simulation 45 min

Activity 2 What Is Money?
Case Study 45 min

Activity 3 How Do We Know Our Money Is Valuable?
Worksheet/Reading 45 min

Activity 4 How Are Modern Financial Transactions Made?
Survey/Discussion 45 min

Section II — Bank Services and Functions

Generalizations:

- An efficient commercial banking system serves a modern economy by providing (1) security for deposits, (2) loans for individuals and businesses, and (3) a system for transferring payments of money.
- The commercial banking system provides a mechanism through which the savings of individuals are rechanneled in the form of loans and investments to businesses and individuals to facilitate economic growth.

Activity 1 Brainstorming Bank Services
Brainstorming/Discussion 15 min

Activity 2 Surveying Financial Services
Survey 30 min

Activity 3 Summarizing Financial Services
Transparency/Discussion 45 min

Activity 4 The Evolution of Money and Banking
Filmstrip/Discussion 30 min

Activity 5 Circular Flow of the Economy
Model Drawing/Transparencies 45 min

Activity 6 How Is a Commercial Bank Different?
Reading/Worksheet 60 min

Section III — The Federal Reserve System

Generalizations:

- The Federal Reserve System was established to clear checks and provide loans to banks. Its major function now is to regulate the supply of money.
- The Federal Reserve System is an independent, quasi-governmental agency.
- The Federal Reserve System consists of 12 regional Reserve Banks and 25 branch banks, supervised by a Board of Governors in Washington, D.C.
- Regional Reserve Banks provide member commercial banks with numerous services, supplying coin and currency, providing safekeeping facilities, functioning as regional check collection centers, and making short-term loans.

Activity 1 Bank Panic
Transparency/Discussion 15 min

Activity 2 Why Was the Federal Reserve System Created?
Reading/Transparency/Discussion 45 min

Activity 3 The Structure of the Federal Reserve System
Transparencies/Discussion/Lecture 45 min

Activity 4 The Three Roles of the Federal Reserve System
Reading/Worksheet/Discussion 45 min

Section IV — How the Clearinghouse Works

Generalizations:

- The Federal Reserve System processes and records checkbook money as a service to the financial community. Efficient administration of checkbook money allows it to become a viable medium of exchange in a complex economic system.

Activity 1 The Story of Checks
Reading/Worksheet/Transparency 45 min

Activity 2 The Need for a Nationwide Check Collection System
Reading/Application Lesson 90 min

Activity 3 Clearinghouse
Simulation/Transparency/Discussion 45 min

Section V — How Banks Create Money

Generalizations:

- Commercial banks are unique among financial institutions because they can create checkbook money by lending deposits in excess of required bank reserves to businesses and individuals.
- The degree to which banks can expand the money supply is regulated by the Federal Reserve System, the institution responsible for controlling the size of the money supply.

Activity 1 How Banks Create Money (I)
Simulation/Transparency/Discussion 90 min

Activity 2 How Banks Create Money (II)
Transparency/Graphing/Discussion 30 min

Section VI — How Monetary and Fiscal Policies Work

Generalizations:

- The Federal Reserve System attempts to promote full employment, economic growth, and price stability by influencing the money supply and the availability of credit to affect total demand in the economy.
- The Federal Reserve System was formed in order to regulate the nation's money supply through (1) reserve requirements, (2) the discount rate, and (3) open market operations.
- Monetary policy (regulating the size of the money supply) cannot solve all economic problems. The decisions of individuals, businesses, and bodies of government also play important roles in influencing our economic system.
- Rational Expectations — a new view — states that people will act logically and rationally to maintain the purchasing power of their incomes when they anticipate inflation.

Activity 1 Supply and Demand for Credit
Worksheet/Reading/Application Lesson 60 min

Activity 2 Effects of Monetary and Fiscal Policies
Simulation 45 min

Activity 3 Monetary Policy: Regulating the Money Supply
Reading/Transparencies 60 min

Activity 4 Banking and the Economy
Filmstrip/Transparencies/Discussion 60 min

Activity 5 Goals of Federal Reserve Monetary Policy
Reading/Application Lesson 90 min

Activity 6 How Prices Affect Income
Worksheet/Discussion 30 min

Activity 7 Why Expansionary Policies Don't Always Work
Reading/Discussion 45 min

Unit Concepts and Definitions

"T" = to help teachers improve their own understanding of the term.

"S" = what student understanding of the term should be upon completion of the unit.

BARTER

T – A planned exchange of one good and/or service for another. This procedure requires at least two exchange agents and reflects the agents' perceptions of the relative values of the goods and/or services.

S – The act of trading goods and/or services.

CENTRAL BANK

T – An institution which deals chiefly with commercial banks in holding reserves, issuing currency, and regulating (through monetary policy) the availability of banking credit. In the United States, the twelve Federal Reserve Banks and the Board of Governors in Washington, D.C., carry out the central banking functions.

S – Bankers' bank which provides temporary credit to commercial banks, holds bank reserves, provides coin and currency, and makes monetary policy.

CHECK

T – A written order which allows a depositor, without previous notice, to transfer all or part of the deposited monies from his or her bank in direct payment to another individual or institution.

S – A written request to transfer money from a checking account.

CLEARINGHOUSE

T – An organization, established by banks in the same locality, through which checks and other information are exchanged and net balances settled. The Federal Reserve System acts as a clearinghouse for banks in different districts.

S – A group of banks which exchange checks drawn on each other.

COMMERCIAL BANK

T – A privately owned financial institution that accepts time and savings deposits and demand deposits. Commercial banks make loans to businesses and individuals; they are major investors in government securities and in municipal and corporate bonds, and they provide other financial services to customers. Through its lending and investing, the commercial banking system expands and contracts the money supply, within limits set by the Federal Reserve System.

S – A privately owned financial institution which holds time and savings deposits and demand deposits. Commercial banks make loans to businesses and individuals, and they invest in government securities and municipal and corporate bonds. They also provide other financial services to their customers.

CREATE MONEY

T – Commercial banks create money by granting loans which add new deposit dollars to the checking account balances of businesses and individuals. The amount they can create is limited to the amount of excess reserves they hold. Excess reserves are those in excess of what they are required to hold by the Federal Reserve or other regulatory agencies.

S – Commercial banks expand the money supply by granting new loans.

DEMAND DEPOSIT

T – A deposit in a bank which may be withdrawn by writing a check.

S – Checkbook money.

DISCOUNT RATE

T – The interest rate Reserve Banks charge member commercial banks for temporary loans. Reserve Banks make such loans to avoid the financial panics that used to be caused when commercial banks could not meet short-term requests by customers to withdraw their funds.

S – The "price" the Federal Reserve Banks charge their member banks for money (loans).

ECONOMIC GROWTH

T – A long-term increase in the economy's total output of goods and services. To achieve maximum economic growth requires saving and investment. The Federal Reserve System attempts to achieve a stable economic growth through monetary policy.

S – A net increase in the amount of goods and services produced, usually measured by a change in real Gross National Product (GNP).

ECONOMIC STABILITY

T – A high level of economic activity with an absence of severe cyclical fluctuations in the economy. Stability refers to production, employment, and prices.

S – Little or no change in production, employment, and prices.

THE FEDERAL RESERVE SYSTEM

T – The central bank of the United States. It is a banker's bank, providing temporary credit and other services to commercial banks. It is also responsible for monetary policy.

S – A network of banker's banks which helps regulate the amount of money in the economy.

FISCAL POLICY

T – The use of federal taxing, borrowing, and spending powers to change the level of income and employment in the economy.

S – Federal government taxing and spending actions which influence consumer demand and business activity.

INFLATION

T – A general rise in the prices of goods and services. As prices rise the purchasing power of the dollar declines.

S – The rise in the general price level of goods and services.

INTEREST

T – A price for using the money resources of other individuals or institutions. Like other prices, interest is determined by the supply of and demand for money resources.

S – The price charged for the use of borrowed money.

LOAN

T – An amount of money provided, for an interest charge, to a business or an individual by a financial institution. It must be paid back. This procedure places available funds into the hands of individuals who are attempting to invest in productive enterprises.

S – Money temporarily provided to a person or group, for a fee, which must be paid back.

MONETARY POLICY

T – Actions of the Federal Reserve System to influence the level of total demand and the amount of economic activity in the economy through changes in the rate of growth of the money supply.

S – Federal Reserve actions which influence the availability of money and credit for individuals and business groups.

MONEY

T – Anything which serves as a medium of exchange, a measure of value, and a store of value which is commonly acceptable. In our economy the basic forms of money are coin, currency, and checking account balances.

S – Anything which is generally accepted in exchange for other things.

MONEY SUPPLY

T – The amount of money—coins, currency, and deposits in checking accounts—the public has immediately available for spending. Also called M1.

S – The total amount of money in the economy.

OPEN MARKET OPERATIONS

T – Federal Reserve purchases and sales of government securities through a network of private security dealers. Open market operations are conducted to influence the level of bank reserves and the rate of growth of the money supply. The New York Reserve Bank conducts open market operations for the Federal Reserve System.

S – Buying and selling of government securities by the Federal Reserve to influence the growth of the money supply.

RECESSION

T – A temporary downturn in economic activity characterized by a fall in Gross National Product and labor force employment.

S – A reduction in business activity.

RESERVE REQUIREMENTS

T – The percentage (usually about 14%) of funds banks are required by law to hold as a kind of backing against their customers' deposits. Funds beyond reserve requirements can be used to make loans to businesses and individuals, or can be invested in government or other securities.

S – The percentage of money commercial banks must keep on hand.

UNEMPLOYMENT RATE

T – The percentage of the total labor force which wants to work, but is unable to find a job, at a particular point in time. The annual unemployment rate is the average of the monthly rates.

S – The number of people who are not working out of every 100 possible workers.

What Economic Educators Should Know*

RESOURCES — A resource is anything which is used or could be used to produce other things.

Explanation: Resources are the building blocks or inputs from which the goods or services that satisfy human wants are formed. There are four generally accepted categories of resources:

1. **Natural resources** are items found in nature which can be used in production. Some natural resources are used up in production while others can be renewed.
2. **Capital resources** are man-made resources that are available to produce goods and services in the future. The variety and complexity of a group's capital resources reflect its state of technological development.
3. **Human resources** are the physical and mental capabilities of a group. Human resources need to be analyzed from the standpoint of both quantity (number of people) and quality (skills, education, and creativity).
4. **Time** limits the number of resources that can be utilized in production and also limits the amount of goods and services that can be consumed by an individual or a group.

SCARCITY — Scarcity of resources is the basis of economics. Scarcity is the reality that there are not enough resources to satisfy everyone's needs and wants

Explanation: The basic characteristic of resources is that they are found in finite and therefore exhaustible quantities. Consequently, the goods and services that can be produced are limited in number. The essential problem for all economic systems is, therefore, to decide how best to allocate their scarce resources.

OPPORTUNITY COST — Since resources are scarce, decisions have to be made among alternatives as to what will be produced. Whatever must be given up (not produced) because something else was produced is opportunity cost.

Explanation: Opportunity cost exists for individuals as well as for nations. Individual choices of purchases, careers, leisure activities, and many others involve opportunity cost. Similarly, nations make choices as to how to allocate their resources—what will be produced and what will not. An understanding of the costs and benefits of decisions should help both individuals and societies to make wise economic choices.

MARKETS — A market is the total number of buyers and sellers of a particular good or service in a specific period of time.

Explanation: There is no one market for all goods and services. Each good or service has its own set of buyers (demand) and sellers (supply) which interact to determine the price at which it is sold.

1. **Demand** is the amount of goods and services which prospective buyers are willing to purchase in a given period of time and at a given price. It is not a fixed amount. When price goes up, the amount demanded decreases; when price goes down, the amount demanded increases.
2. **Supply** is the amount of goods and services which prospective sellers are willing to sell in a given period of time and at a given price. It is not a fixed amount. When price goes up, the amount supplied increases; when price goes down, the amount supplied decreases.
3. **Price** is the actual monetary amount at which a good or service is sold. One would expect price to vary as supply and demand vary, but market imperfections and changes in incomes, other prices, and tastes make accurate predictions about price changes difficult.

INCENTIVES — Incentives are factors which stimulate people to act one way or another.

Explanation: In an economic system, producers and consumers need to have a motive for producing and consuming. Generally, incentives include monetary incentives (wages, interest, rents, and dividends), material incentives (those goods and services which monetary incentives can buy), and psychological incentives (status, leisure time, location, job security). A host of intangibles which reflect a person's "value system" falls into this final category.

EFFICIENCY — Efficiency refers to the ability of our economy to produce the largest possible amount of goods and services with the resources available to the economy. When efficiency is achieved, an economy could not produce any more of *one* type of output without reducing the output of something else.

Explanation: Because political systems, personal values, and cultural values differ from society to society, the measures of efficiency must change when analyzing other economic systems. Even within our own economic system, measures of efficiency must take into account that the benefits to individuals and society can be both psychic and material.

ECONOMIC GROWTH — Economic growth is the process of expanding the amount of goods and services that can be produced.

Explanation: Because resources are limited, economic growth must be made at the sacrifice of current consumption through savings. Resources that could have been consumed need to be divided between

*William E. Becker, Jr. and Robert Reinke, *The Social Studies*, 1975.

acquiring new capital and reorganizing existing resources toward a new objective. The opportunity cost of economic growth is reduced current consumption in the hopes that new capital, technology, or organization will produce more total output at a later time.

Rational Expectations

Supplemental Reading for Teaching Activities #6 and #7 in Section VI

There is a newer alternative view of how government stabilization policies work or don't work. This view is called the rational expectations (RE) approach. It is based on several fundamental principles about the systematic behavior of people and businesses in the economy, and it leads to the conclusion that government policies designed to reduce the unemployment rate will be ineffective.

The first basic principle underlying the RE view is that economic units such as businesses and individuals care about real rather than nominal things (for example, real wages versus money or nominal wages). Nominal or money wages are the dollar amount of wages. What people are concerned about are real wages—nominal wages adjusted to remove the effects of inflation. Therefore, when these persons make economic decisions or take actions, they consider what future inflation will do to their income.

Examples of how people incorporate expectations of inflation into their current actions and decisions are readily apparent. For example, in taking a job individuals will be concerned not only with the nominal amount of pay they will receive, but they are also concerned with what that amount of pay will buy. That is, they are concerned with real wages or the purchasing power of their nominal or money wage—whether it will cover their rent or house payment, the operation of their auto, etc. They are also concerned with what prices will be in the future because that will also determine how well their income will enable them to meet their financial obligations.

A second basic principle underlying the RE approach is that people's expectations of inflation will not systematically be wrong. To assume they will be wrong implies that decision-makers are illogical, irrational, or unaware of economic events around them. For example, because labor unions must bargain for wage contracts that extend into the future, inflation will affect the future real wages of labor. Therefore, the effectiveness of union wage negotiations in maintaining or upgrading members' real wages will depend in part on how well negotiators forecast future inflation. With so much at stake it is logical that they attempt to make good forecasts of inflation.

An understanding of these basic principles allows a closer look at how economic stabilization policy is supposed to work. During periods of high unemployment, expansionary monetary and fiscal policies have often been used to promote an increased level of spending (and output and employment) in the economy. The increased spending raised prices. Money wages, meanwhile, were supposed to remain constant, thus offering new profit opportunities to businesses. As businesses took advantage of these profit opportunities—increasing production and investing in new equipment—the unemployment rate was supposed to drop. Even people who favor stimulative policies concede that at some point they stop encouraging production and only cause more inflation.

In the RE view, stimulative policies—right from the start—do little to increase production and do much to aggravate inflation. Such policies raise prices and increase spending. However, this can result in increased profit and expanded production and investment only if the wages of workers do not also increase. If wages do not increase, workers would in effect be working for less. As prices go up, real wages go down (unless there is an increase in wage rates that compensates for inflation). The RE approach, then, holds that the higher prices resulting from government policies are certain to be quickly accompanied by higher wages. This happens because workers, acting rationally, will incorporate their expectations of inflation into their wage demands.

Traditional expansionary policy only works if labor, as a group, willingly goes along with it, without demanding higher wages to compensate for the price increases they expect. This, obviously, is not likely to happen. It is more likely that workers will restrict the supply of labor and hold out for higher wages when they foresee a rise in prices.

Proponents of the RE approach contend that there is only one way traditional expansionary policy can work. That way is to induce labor to go along with the inflationary policies without demanding higher wages. This can be accomplished by surprising labor through adoption of unanticipated policies which create higher prices and profit opportunities for businesses. Such policies will promote higher employment in the economy, but the gains will be short-lived. As labor catches on to what is happening to real wages, they will again hold out for higher wages to compensate for inflation. That is, as the surprise of the unanticipated policy wears off, the policy loses its ability to reduce unemployment and instead creates more inflation. Further gains in employment are possible then only through additional surprise policies. The moral is that government cannot systematically fool people. They catch on.

This analysis implies that government policies which raise prices and are anticipated by people in the economy (such as labor union negotiators) will also raise nominal or money wages and leave real wages unchanged. With the same real wage, the level of employment in the economy will not increase. This leads to the conclusion that government policy cannot be effective in fighting unemployment. Or, alternatively, it can be effective only if policy changes can consistently surprise or fool people. That is the only way to cause people to alter their expectations about potential inflation and hence to alter their behavior. However, the possibility of government consistently fool-

ing people with different policy alternatives seems remote. As a result, the rational expectations approach concludes that policymakers ought to announce and stick to a policy that will gradually bring the inflation rate down to some acceptable specified low level.

In summary, the following major points describe the rational expectations approach:

1. People care about real (as opposed to nominal) things in current and future periods. Therefore, they must form inflation expectations and incorporate them into their decision-making and actions.
2. People will not systematically be wrong in their expectations. This is the rational expectations hypothesis.
3. Stimulative policies can influence the inflation rate but not control it.
4. Rational economic agents will, therefore, attempt to anticipate government policies in forming their inflation expectations.
5. As a result, systematic government policies will have no effect on the unemployment rate. That is because labor demand and labor supply depend on real wages, not money wages, and anticipated governmental actions which raise prices also raise money wages.

See also:

"Rational Expectations—Fresh Ideas That Challenge Some Established Views of Policy Making." *Annual Report 1977*., Federal Reserve Bank of Minneapolis, Office of Public Information, Minneapolis, MN 55480.

Kareken, John H., "Inflation: An Extreme View," *Federal Reserve Bank of Minneapolis - Quarterly Review*, Winter 1978, pp. 7-13, Federal Reserve Bank of Minneapolis, Minneapolis, MN 55480.

Additional Materials

Section I (Activity 3):

Pamphlet - "Genuine or Counterfeit"

Available from:
Office of Public Information
Federal Reserve Bank of Minneapolis
Minneapolis, Minnesota 55480

Section II (Activity 4) and
Section VI (Activity 4):

Filmstrip - The U.S. Economy in Action Series:
The Role of the Commercial Banking System

Available for purchase:
Joint Council on Economic Education
1212 Avenue of the Americas
New York, New York 10036

Available for loan: (within Ninth Federal Reserve District)
Office of Public Information
Federal Reserve Bank of Minneapolis
Minneapolis, Minnesota 55480

Section IV (Activity 1):

Booklet - "The Story of Checks"

Available from:
Publications Section
Federal Reserve Bank of New York
33 Liberty Street
New York, New York 10045

Reference Materials

For Students:

Federal Reserve Today. Describes Federal Reserve System's role today—objectives, structure, and actions. Discusses influence of System's activity, monetary policy tools, policymaking process, and limitations and advantages of monetary policy. Federal Reserve Bank of Richmond, Bank and Public Relations Department, P.O. Box 27622, Richmond, Virginia 23261, 1974, 23pp., Free.

Fundamental Facts About U.S. Money. Describes physical characteristics of the various types of U.S. currency and coin. Federal Reserve Bank of Atlanta, Information Center, Research Department, Federal Reserve Station, Atlanta, Georgia 30303, 1976, 16pp., Free.

Genuine or Counterfeit? Pamphlet describes differences between a counterfeit and a genuine bill and what to do when a counterfeit bill is found. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1974, Free.

The Story of Checks. Describes the origin and development of checks and the growth and automation of check collection. Illustrated comic book form. Federal Reserve Bank of New York, Publications Section, 33 Liberty Street, New York, New York 10045, 1975, 21pp., Free.

The Culpeper Switch. Describes how the Federal Reserve Communications System (FRCS) transfers more than $140 billion in funds and securities daily through a 40,000-mile electronic communications network. Considers the FRCS's history and future use of electronic funds transfer. Federal Reserve Bank of New York, Publications Section, 33 Liberty Street, New York, New York 10045, 1975, 18pp., Free.

The Story of Money. Examines the evolution of money, touching on topics such as barter, commodity monies, early gold and silver monies, America's colonial experiences with money, and the development of fiat money. Intended for high school students and interested adults. Federal Reserve Bank of New York, Publications Section, 33 Liberty Street, New York, New York 10045, 1977, 24pp., Free.

Your Money and the Federal Reserve System. Describes various services performed by Federal Reserve Banks, with special emphasis on how currency and coin is supplied. Briefly discusses System structure and how Federal Reserve actions influence the supply of money and bank reserves. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, revised 1976, 16pp., Free.

For Teachers:

A Day at the Fed. Narrative account of a day's operations at the New York Federal Reserve Bank. Covers a Federal Open Market Committee meeting, bank examinations, monetary policy activities, electronic fund transfers, and the Federal Reserve's responsibilities as the government's fiscal agent. Federal Reserve Bank of New York, Publications Section, 33 Liberty Street, New York, New York 10045, 1976, 28pp., Free.

Electronic Funds Transfer: The Future is Now. Identifies many of the common components of the interrelationships between major EFT networks and systems in the nation and in the Ninth Federal Reserve District. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1976, 46pp., Free.

Federal Reserve at Work. Discusses in layman's language the role of the Federal Reserve System in our nation's economy. Outlines principles and tools of monetary policy. Emphasizes Federal Reserve policy in action, plus monetary policy limitations and advantages. Federal Reserve Bank of Richmond, Bank and Public Relations Department, P.O. Box 27622, Richmond, Virginia 23261, 1974, 35pp., Free.

Inflation: An Extreme View. *Federal Reserve Bank of Minneapolis - Quarterly Review*, Winter 1978, Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1978, pp. 7-13, Free.

Open Market Operations. Discusses the problems faced in trying to translate broad policy objectives of the FOMC into day-to-day operations of the Open Market desk. Federal Reserve Bank of New York, Publications Section, 33 Liberty Street, New York, New York 10045, 1974, 47pp., Free.

Rational Expectations—Fresh Ideas That Challenge Some Established Views of Policy Making. *Annual Report 1977*. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1977, 17pp., Free.

Reflections from History: The Minneapolis Federal Reserve Bank. Outlines origin and evolution of the Federal Reserve System and its role in the nation's credit structure. Particular attention is directed to the Minneapolis Reserve Bank. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1973, 39pp., Free.

The Federal Reserve System: Purposes and Functions. The "text book" of the Federal Reserve describes the structure, functions, and objectives of the System. Explains how the System regulates the flow of money and credit, with chapters devoted to an explanation of monetary policy and the Fed's role in the economy. Publications Services, Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551, revised 1974, 126pp., Free (single copies only).

Audio-Visual Aids

In Reserve—Ninth District Federal Reserve Bank. Film; 22 min.; color, sound; Study Guide. Services provided by the Regional Reserve Banks for commercial banks and the general public are described. Relates how the Federal Reserve monitors the economy of the Ninth District and represents these economic conditions in national monetary policy decision making. Available Study Guide provides film content review, suggestions for effective film use, and supplemental information on the Federal Reserve System. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1978. (Available for loan within the Ninth Federal Reserve District.)

Money. Filmstrip; 14 min.; color, cassette tape. Outlines the historical origins of money from commodities to coins and currency to credit. Describes founding of Federal Reserve System to control and stabilize the money supply, and the functions of the Money Department of today's Minneapolis Fed. Shows how coins and currency are received, sorted, counted, destroyed, stored and circulated and how forgeries are detected. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1975. (Available for loan within Ninth Federal Reserve District.)

The Fed . . . Our Central Bank. Film, 26 min.; color, sound. Discusses the purposes and functions of the Fed as the central bank of the United States. Available from all 12 Regional Federal Reserve Banks and Publications Services, Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551.

Simulation Game

You're The Banker. Players assume roles of commercial bankers and grant or refuse loans to bank "customers." Their decisions affect the economic well-being of customers and the economic health of the local community. Decisions also affect the amount of "earnings" the bank receives and the bank with the highest earnings wins the game. Players learn basic economic principles related to money and banking and the Federal Reserve's monetary policy and discounting role. Federal Reserve Bank of Minneapolis, Office of Public Information, 250 Marquette Avenue, Minneapolis, Minnesota 55480, 1973, $15.00 per classroom set.

Answer Key

SECTION I
Activity 2

4. Money is valuable because you can use it in exchange for goods and services you need or want.
5. Marbles would have to be generally accepted in exchange for goods and services in payment of a debt to be considered "money." Their intrinsic value is not important.
6. Physical: money must be easy to carry around, divisible, and easy to store.
   Non-physical: Money must be generally accepted and must measure value.

Review Questions

1. c
2. b
3. Money is anything that is generally acceptable in exchange for goods and services.
4. A medium of exchange—exchange $4.98 for a record.
   A store of value—save $5 a week to buy a 10-speed bike.
   A measure of value—the bike you want is worth $100.
5. c
6. e
7. e
8. d
9. Exchange with cash, use of checks, use of credit cards, use of electronic funds transfer.
10. b

SECTION II
Activity 6

(1) 1. To accept and safeguard customer deposits.
2. To collect checkbook money.
3. To make loans to businesses and individuals.

(2) A deposit that can be withdrawn without advance notice.

(3) A deposit that earns interest, is deposited for a period of time, and requires advance notice for withdrawal.

(4) A written order to transfer funds.

(5) 1. Investing some deposits.
2. Lending out some deposits.

(6) Subtract interest charges from the face value of the loan.

(7) 1. Direct savings of individuals to where they can be used by businesses and individuals for investment and spending.
2. Shorten the time funds are not "working" by efficient check collection and transfer of funds.

Review Questions

1. d
2. c
3. b
4. c
5. b
6. a
7. c
8. b
9. a

SECTION III
Activity 2

(1) Sam has $0.35 in reserves so he will be able to pay each depositor $0.05 (5 x .05 = .25) and still have $.10 in reserves.

(2) Two depositors withdrawing all their money means a total withdrawal of $0.50. Sam only has $0.35 in reserves so he could not give both depositors all of their money.

(3) It is very unlikely under normal circumstances. However, special economic reasons, seasonal or temporary conditions, or psychological concerns of depositors may cause many people to withdraw money on a given day.

(4) The Federal Reserve System would make a short-term loan of $0.15 to Sam so he could pay off his depositors. On Friday Arnold would repay his $0.90 loan, and Sam could pay back his loan with interest.

Activity 4

(1) 1913.
(2) Elastic.
(3) Money (money and credit).
(4) Monetary.
(5) Quasi-governmental.
(6) Pertaining to taxes, public revenue, and public debt.
(7) One who acts for, or in the place of, another person or group by its authority.
(8) The Federal Reserve System, as fiscal agent for the U.S. Treasury Department, handles matters dealing with taxes, public revenue, and public debt by authority given it by the U.S. government.
(9) As a bankers' bank, the Fed provides loans and essential services to financial institutions, thereby helping everyone.
(10) 1. Accepting and safeguarding customer deposits.
2. Collecting checkbook money.
3. Making loans to businesses and individuals.
(11) These responses will vary with different students.

Review Questions

1. c
2. c
3. b
4. c
5. e
6. c
7. b
8. a
9. d
10. c

SECTION IV
Activity 1

(1) A check is acceptable in exchange for goods or services. You don't have to keep a lot of cash on hand to pay bills and make purchases. Checks are safe and easy to send through the mail.

(2) It was quicker to exchange bundles of checks at the coffeehouse with the other bank messengers than to go all the way to the messenger's bank.

(3) Boston, 1681—"The Fund at Boston in New England."

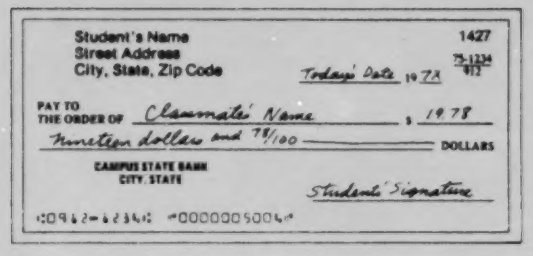
(4) a. Growth of cities.
b. Improved transportation.
c. Cheap, uniform postal rates.

(5) To avoid paying "exchange charges." Correspondent banks had an agreement with each other whereby no exchange charges were made.

(6) It provided for a national check clearing and collection center.

(7) a. Seller deposits buyer's check into his or her checking account at a local bank.
b. Local bank deposits check for credit at its Federal Reserve Bank.
c. Federal Reserve Bank sends check to the Federal Reserve Bank in the district where the buyer has a checking account.
d. Buyer's Federal Reserve Bank sends check to the buyer's local bank which deducts it from buyer's checking account balance.
e. Buyer's local bank authorizes Federal Reserve Bank to deduct the amount of the check from its reserve account.
f. Buyer's Federal Reserve Bank pays the seller's Federal Reserve Bank from its share in the Interdistrict Settlement Fund.
g. Seller's Federal Reserve Bank credits the reserve account of the seller's bank and the seller's bank credits his or her checking account for the amount of the check.

(8)

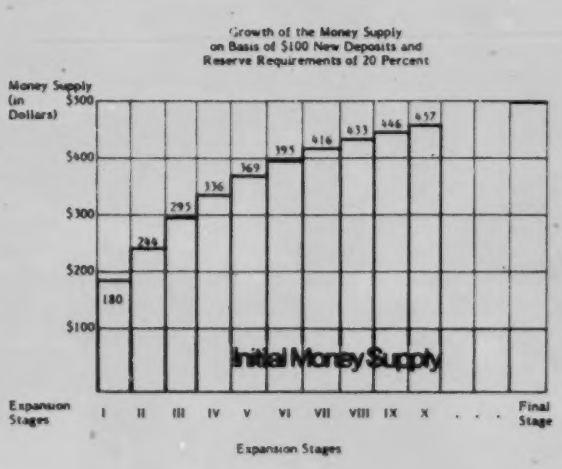


(9) Magnetic ink characters are used for the electronic sorting of checks at Federal Reserve Banks and regional check processing centers.

Review Questions

1. b
2. d
3. b
4. d
5. d

SECTION V
Activity 2



Review Questions

1. b
2. c
3. c
4. d
5. d

Answer Key *continued on next page.*

Answer Key *continued from page 13.*

SECTION VI

Activity 1, Part 2

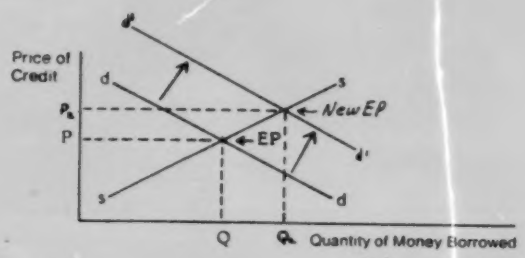
More.
Less.

Activity 1, Part 3

Case #1

1. Demand for, increase.
2. Demand, right.

3,4,5,6.

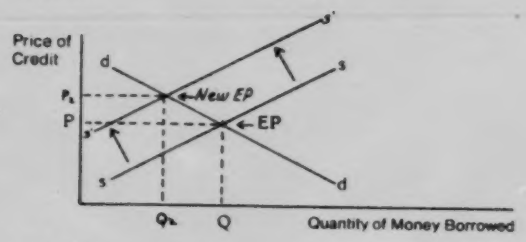


7. Up.

Case #2

1. Supply of, decrease.
2. Supply, left.

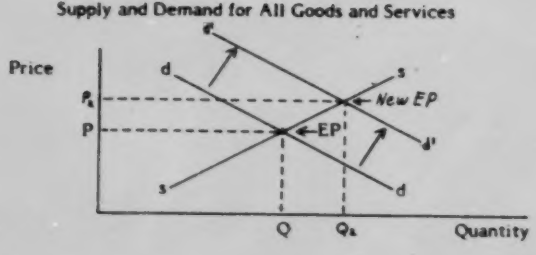
3,4,5,6.



7. Up.

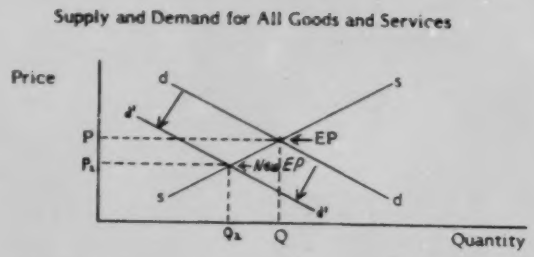
Activity 5

Graph #1



Price goes up.

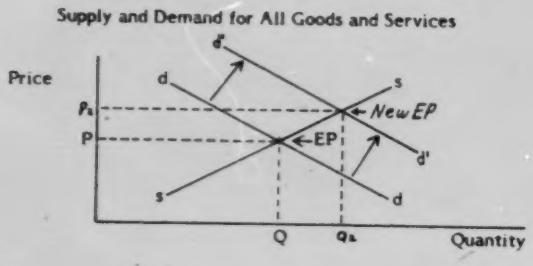
Graph #2



Price goes down.

Graph #3

Demand will go up.



Review Questions

1. d
2. a
3. c
4. d
5. b
6. a
7. c
8. c
9. c
10. b

Section I Money

About This Section . . .

Money performs an important function in today's society. Section I will help students identify what money does for them and its role in an economic system such as ours. Knowledge of the functions and forms of money will provide students with the necessary background to study the topics of banking and the Federal Reserve System in later sections.

Generalizations:

- Money is anything that is acceptable in exchange for goods and services.
- Money represents a tool of a modern and complex economic system.
- Money can take any form as long as it is accepted as (1) a medium of exchange, (2) a store of value, and (3) a measure of value.
- In a modern economic system, money should be (1) a medium of exchange, (2) divisible, (3) stable in value, and (4) difficult to reproduce.
- Modern types of money are coin, currency, and checks, but financial transactions can also be made without money, by means of credit cards or electronic funds transfer.

Activity 1 - "Exchange Escapade"

OUTCOME: By experiencing and identifying the inefficiencies of barter, students will see the need for a medium of exchange.

Discussion/Simulation *Time: 45 min.*

Materials Needed:
Exchange Escapade Cards

Activity Instructions:
Begin this activity by asking students to identify the ten most important inventions for the development and maintenance of a modern society as we know it in the United States today. Allow the students to discuss ideas among themselves and to attack one another's ideas so they begin to see the complexity and difficulty of the task you have given them.

After a few minutes of unstructured discussion, make a list of inventions on the chalkboard. If more than ten items are listed, conduct a vote for the ten most important inventions by allowing each student to vote for ten. Tally the ballots and analyze the results using the following questions:

- Do the items listed help people work more efficiently?
- Are the items listed useful to a small or a large number of people?
- Under which broad category of service do these items fit? [agriculture, communication, distribution, education, energy, labor, management, production, professional, transportation, etc.]
- Is money or a method of exchanging goods or services listed?
- Do you think money should be included on a list such as this? Why or why not?

Opinions on the last question should vary greatly at this point. To clarify the special function of money in a complex society, continue this activity with the "Exchange Escapade" game.

Select ten students to become game players, and direct them to place their desks in a small circle in the center of the room. Direct the remaining students to place their desks around the game players in a fishbowl arrangement. The observers should be far enough away from the game players to allow for their movement.

Supply each game player with an "Exchange Escapade" card. Each card represents an item or a service. Each card also provides the owner with simple directions. One cardholder is dissatisfied with the item or service he or she owns, while the others are happy with what they have. The unhappy owner attempts to exchange a hammer for a transistor radio. The remaining nine players will only trade the items or services they possess for the particular things stated on their cards. The teacher may want to choose an outgoing and intelligent student for the dissatisfied owner, since this person is responsible for keeping the game moving.

Begin the first exchange round by allowing the unhappy owner to try to exchange his/her hammer for the desired item, a transistor radio. The owner of the hammer should first find out who has the radio and should then try to arrange an exchange. The owner of the radio should follow the instructions on the card and only trade the radio for a haircut. At this point, the teacher can suggest that the owner of the hammer could try to trade the hammer for a haircut in order to obtain the radio. Continue this procedure until the unhappy owner has finally received the item he or she really wants and all players are satisfied with the items or services they own, following their instructions on the cards.

While the class is still in the game position, discuss the activity using the questions listed below for game players and observers:

Outside Observers

1. What items or services were present in this society? What fraction of goods and services do these items represent in a society such as the United States?
2. What forced the unhappy owner to make so many exchanges?
3. Does the problem you have just observed ever exist in reality? Explain.

Game Players

1. Is it realistic for different people to value items/services differently? Explain.
2. What determines value?
3. What feelings did you have as you played this game?
4. How could you eliminate this problem from recurring in your society of ten?

Teacher Option:
To increase student participation, the instructor may wish to divide the class into groups of 10. Each group would then experience the simulation activity. Discussion could proceed in small groups.

Activity 2 - What is Money?

OUTCOME: Students will be able to write a definition of money in terms of its special characteristics and functions.

Case Study *Time: 45 min.*

Materials Needed:
- *Reading #1* - "Welsh's Warehouse"
- *Reading #2* - "Commodity Money"
- *Reading #3* - "Your Money"
- *Transparency #1* - "Money: What Gives It Value?"
- *Transparency #2* - "Characteristics of Money"
- *Transparency #3* - "Functions of Money"

Activity Instructions:
Direct the students to count off by threes and form groups according to their numbers. Each group is to review one of the selected readings. Assign each group the task of reading the selection, appointing a spokesperson, discussing the reading, and answering the following questions.

1. Summarize your reading. (Tell the story in your own words.)
2. What is a good definition of the term *money* in terms of the reading?
3. What form(s) did money take in the selection you read?
4. What makes "money"—in any form—valuable?
5. What would have to change if you wanted marbles to become money?
6. What physical characteristics must money have to be considered money? What non-physical characteristics?

Upon completion of the group work, each spokesperson should report the group's answers to the total class. Transparencies #1, #2, and #3 should be used to illustrate generalizations made in culminating classroom discussion.

Activity 3 - How Do We Know Our Money is Valuable?

OUTCOME: Students will list the costs and benefits of counterfeiting and know how a counterfeit bill is detected.

Worksheet/Reading *Time: 45 min.*

Materials Needed:
- *Worksheet: Counterfeiting*
- *Reading #4* - "Genuine or Counterfeit" (See "Additional Materials")

Activity Instructions:
If people are to have faith in the ability of money to be:

1. a medium of exchange
2. a store of value, and
3. a measure of value,

they must be confident that the money they have is valuable.

Distribute the "Worksheet: Counterfeiting." Direct each student to follow the directions explicitly and answer all questions. Inform the class that a Federal Reserve publication, "Genuine or Counterfeit," is assigned at the end of the lesson. Make these pamphlets available to students.

Discuss this activity upon completion using the following questions:

1. Why is counterfeiting illegal? [If people could make their own money, so much would be made that it would become worthless and, eventually, not acceptable.]
2. What would happen if there was massive counterfeiting? [People would be unsure about the value of their money; they would be reluctant to accept it in exchange for goods and services and would have difficulty getting others to accept it in payment for goods and services.]
3. What keeps more people from counterfeiting? [Difficult and complicated methods used to produce currency; use of a high quality of paper not generally available; laws against counterfeiting, detection of counterfeits, and enforcement of counterfeiting laws by the Secret Service.]

Teacher Option:
Students seem particularly interested in the criminal aspects of counterfeiting. Contact (or invite into the classroom if possible) a Secret Service representative to find out more about the number of such crimes, the punishment, and the reasons for punishment.

Activity 4 - How Are Modern Financial Transactions Made?

OUTCOME: Students will know the four ways financial transactions can be made and identify writing checks as the one most frequently used.

Survey/Discussion *Time: 45 min.*

Materials Needed:
Financial Transaction Survey Form

Activity Instructions:
In this activity the students are to calculate the percentage of financial business their family does with cash, checks, credit cards, and electronic funds transfer. Ideally, this assignment should be given over a weekend, but an evening is sufficient to collect interesting and informative data.

Distribute to every student a copy of the Financial Transaction Survey Form. Assign them the task of completing the form by an agreed-upon date and direct them to be ready to discuss the results. (Note: No actual number of dollars is asked for or desired on the survey form. Stress to the students that this activity is not designed to collect information on family income or spending habits.)

During a follow-up discussion, have students compare the percentages of household expenditures made using cash, checks, credit cards, and electronic funds transfer. Explain how using a credit card does not complete a financial transaction. It is only a means of borrowing money that is to be paid back at a later date—usually within 30 days to avoid extra charges. Students may be unfamiliar with the concept of electronic transfer of funds. Explain how money is transfered from one person or institution to another with no check being written. Bank accounts are merely credited or debited by a computer. (For background information see "Electronic Funds Transfer, The Future is Now" in "Additional Materials").

From their own survey results, students should be able to generalize about the relative use of cash and other financial tools in their households. The percentage of transactions made by check usually far exceeds those for cash. Electronic funds transfer may not be used at all for household expenditures.

EXCHANGE ESCAPADE CARDS

Hammer - Dissatisfied Owner - Exchange your hammer for a transistor radio.	Ring - Satisfied Owner - Exchange only for a gold pen.
Transistor Radio - Satisfied Owner - Exchange only for a haircut.	Gold Pen - Satisfied Owner - Exchange only for a steak dinner.
Haircut - Satisfied Owner - Exchange only for eyeglasses.	Steak Dinner - Satisfied Owner - Exchange only for a pair of concert tickets.
Eyeglasses - Satisfied Owner - Exchange only for gloves.	Two Concert Tickets - Satisfied Owner - Exchange only for two flute lessons.
Gloves - Satisfied Owner - Exchange only for a ring.	Two Flute Lessons - Satisfied Owner - Exchange only for a hammer.

WELSH'S WAREHOUSE*

"Achtung! Achtung!" the loud-speaker blared across the compound of Stalag X. What followed was a dismal repetition of orders, details, and regulations which, the commandant continually reminded the American prisoners of war, were necessary for the operation of a "successful prisoner of war camp."

Standing in the cold December breeze, the prisoners were not particularly impressed with Herr Gratz' appeal for a good camp. As Dave Welsh from New Jersey commented, "Who the heck wants to be a successful prisoner of war?" On this particular morning, however, the commandant personally made the announcements and then added that a special treat was in store for the men--International Red Cross representatives would distribute Red Cross Christmas boxes to all prisoners later that afternoon.

In spite of the barbed wire and German guards, there was an almost festive mood as the prisoners lined up to receive their packages. While not entirely starved at the camp, they missed the variety of "state-side" cooking and eagerly awaited the canned fruit, candy, gum, and even the hard cookies which were usually included in the Red Cross gifts. Another item which was important even to non-smokers was the tobacco and cigarette allowance.

That evening the barracks were the scene of pre-Christmas celebrations as the prisoners traded those items they didn't want for those they wanted. Razor blades were swapped for candy, gum, and soap by some of the prisoners who were young enough to get by without shaving. Although Dave Welsh was opposed to being a successful prisoner, he saw no harm in being a successful trader, and it was his footlocker which became the center of activity in the weeks following a package distribution. With a craving for candy and "soap that lathers," he had used his razor blades and cigarette ration to satisfy his

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*Adapted from R. A. Radford, The Economic Organization of a P.O.W. Camp, 1945. Reprinted with permission from Economica.

WELSH'S WAREHOUSE*

needs and also build up enough extra to satisfy the needs of others--that is, if they were willing to trade with him. Even the German guards were known to make use of Dave's supply of extras, bringing him fresh fruit or eggs in exchange for the much-coveted American tobacco or candy.

At first, the trading around Dave's footlocker was quite informal and there was no particular rule which made so many cigarettes worth so much soap. However, after a disagreeable dispute over the fact that Dave had charged one man five cigarettes for one candy bar while charging another three for the same kind of bar, he set up a rate of exchange in which all items traded were given a cigarette value. On the next trade day the prisoners watched Dave pin his exchange rates above his locker. It read:

NOTICE TO ALL GIs

From December 1, 1944, the following exchange rates will be official at "Welsh's Warehouse":

1 bar soap = 2 cigarettes
1 candy bar = 4 cigarettes
1 razor blade = 6 cigarettes
1 can fruit = 8 cigarettes
1 can cookies = 20 cigarettes

Soon Dave's exchange list was accepted by the whole camp and much of the friction over unfair exchanges or favoritism disappeared.

Dave wasn't particularly known for his generosity, but sometimes he was persuaded to loan cigarettes to men who had used up their own rations, and on the occasion of the American group leader's silver wedding anniversary he donated some cigarettes so that the German cooks could be bribed into baking a cake. "Welsh's Warehouse" helped to make camp life a little more tolerable.

In the spring of 1945, however, all this changed. With Allied bombing missions taking a steady toll of German bridges and railroads, the German authorities began to use

WELSH'S WAREHOUSE

prisoners of war as repair crews. Dave Welsh was assigned to one such crew and was gone from the camp for almost a week. And what a week it was--heavy spring rains made road and bridge work extremely difficult, and when Dave returned to camp, flooding had swamped the barracks floor and left the contents of Dave's locker a soggy mess. Razor blades had rusted, candy bars had molded, and the cigarettes fell apart as Dave lifted them from the locker.

A week ago Dave had been the center of camp life and the men used his judgment as the measure of what items should cost. Now he could hardly give away what last week had been the most valuable items in the camp. One heavy spring rain had changed him from a successful trader to just another successful prisoner of war.

COMMODITY MONEY

Barter, in its simplest form, is the exchange of goods or services between two persons. Both persons have a real need for the items they obtain in the trade. A toolmaker, for instance, trades a stone axe to a hunter for an animal skin. The toolmaker's family needs the skin to make a winter coat, while the hunter's family needs the axe to make fires for cooking. Neither family can produce these goods easily by themselves.

Barter, however, isn't always this simple. If the toolmaker doesn't need an animal skin, he or she might still trade for it. Perhaps the toolmaker's family really needs some grain for bread and cereal. The toolmaker first trades an axe for an animal skin, and then takes the skin to a farmer and exchanges it for a sack of wheat. In this way, the hunter, the toolmaker, and the farmer all obtain what they need. The animal skin is used as a medium of exchange--it enables the toolmaker's family to get what they really want. Animal skins, tools, and grain are thus "commodity money."

It is important that commodities used as money keep their value until they are traded again. Fresh meat is not a good form of commodity money because it could spoil. Animals are not a good form of commodity money because they could get sick or die. Even if they stay healthy, they are not a convenient form of money because they are costly to keep, difficult to transport, and not divisible.

Items used as commodity money are not always vital to people's survival. Any item that is valued, for whatever reason, can be used as a medium of exchange. Seashells, for example, were a common commodity money in societies where the basic needs for food, clothing, and shelter were met and people could afford to value other things. Shells were valued as decorations and as charms to ward off evil spirits.

Eventually, systems of exchange based on commodity monies evolved. People could then value one item in terms of another. One society, for example, could establish the following exchange rates:

COMMODITY MONEY

1 animal skin = 3 stone axes
1 sack of wheat = 30 seashells
1 cow = 2 blocks of salt

Such exchange rates would be based on need and scarcity and would vary from one geographical area to another.

Commodity money is an important step beyond barter. Barter is simply the exchange of goods or services without money. But commodity money is a medium of exchange—it is the first true money.

YOUR MONEY*

Some things never change. Primitive cultures had many of the same needs we have today--for what we now call "money."

They needed a way to trade the things they made or raised or hunted for other things they wanted. They needed a way to measure the value of things. They needed a way to save or store the value of what they produced, so that value could be used or exchanged later on. They needed money.

We're still working on better ways to perform these functions--making money work as a medium of exchange, a measure of value, and a store of value for future use.

Without Money We Must Barter

The ancestor of money was the barter system--where one product or service was exchanged for another. Barter would be a cumbersome way of doing business in today's world. For example, how many cows would an automobile dealer take in exchange for a car? Perhaps the car manufacturer would prefer horses. Then the dealer would have to exchange cows taken in trade for horses. Our ancestors found they were wasting a lot of time arranging trades, time that could better be spent producing things. So they sought a better method of exchange.

Early Forms of Money

As an improvement on barter, certain popular, measurable commodities came to be used as mediums of exchange. Standard items such as salt, tea, pelts, beads, cattle, or grain had general acceptance in trade and were used as money. Thus, a person could buy something with a widely accepted commodity. And the seller in turn could trade that same commodity for his/her own purchases. This system was an improvement over direct barter but was still cumbersome. Besides, not all commodities could be stored for future use.

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*Adapted from Your Money and the Federal Reserve System, Federal Reserve Bank of Minneapolis, 1976.

YOUR MONEY

Coins Serve as Money

Primitive people began to use metals, particularly gold and silver, in place of commodities as forms of money. Metals provided a measure of value and were easily stored or saved for future use. Metal could also be formed into coins or tokens of different values. Early coins carried likenesses of kings and emperors, just as modern coins carry images of political leaders.

Disadvantages of Coin

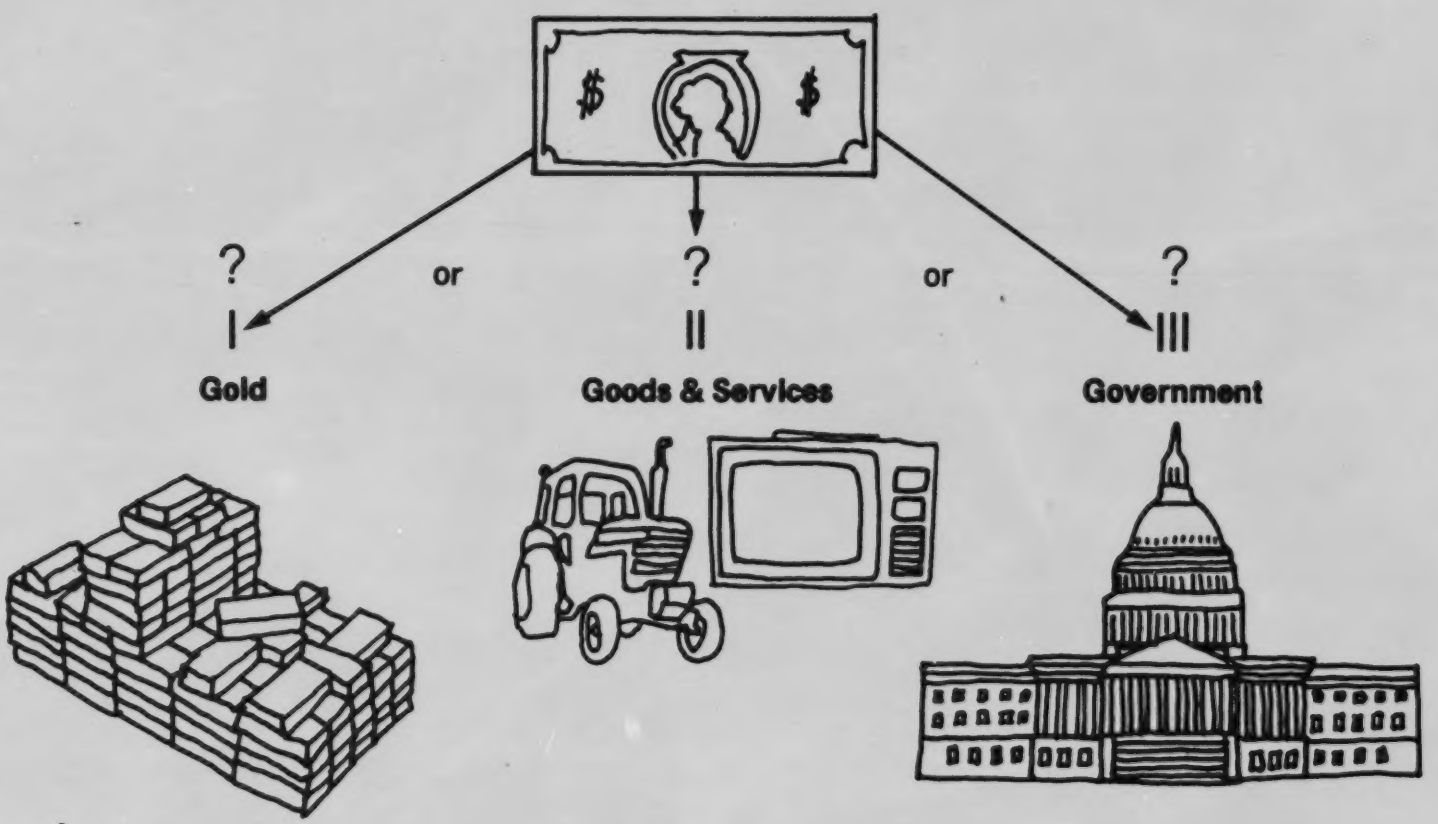
While coins possess the basic qualities that people require of money, they have two major faults. They are not convenient to carry in large amounts and, more important, the supply of coins is limited to the metals available. With coins the money supply depends on random forces such as silver and gold discoveries, rather than on the needs of commerce, industry, and agricultural production. Since the usefulness of money is more important than the substance it is made from, coins are now used less often than other forms of money.

Modern Types of Money

The nation as a whole holds coin worth about $10 billion, currency worth about $85 billion, and checkbook money worth about $260 billion. Checks are used to make most financial transactions. The amount of checking account deposits continues to grow each year—at a rate of approximately $10 billion per year.

One relatively new way of making financial transactions is electronic funds transfer. Electronic funds transfer is not, strictly speaking, a type of money. At present, it accounts for only a small percentage of financial transactions, but in the future it will become more significant as it helps to decrease the number of checks individuals and businesses have to write.

Money: What Gives it Value?



Characteristics of Money

Easy to carry around

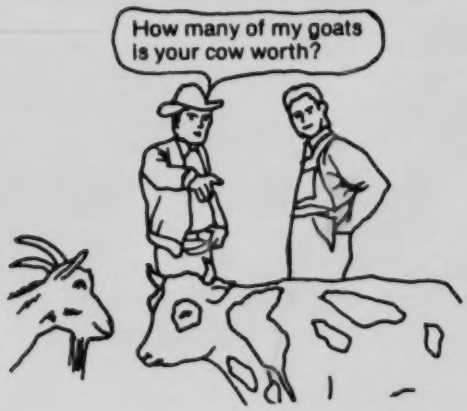
Divisible

Generally Accepted

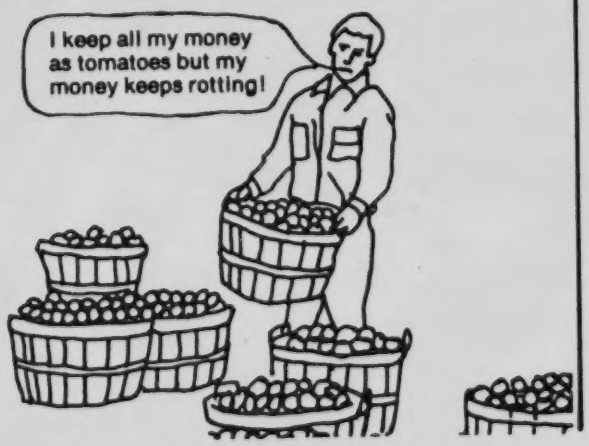
Functions of Money

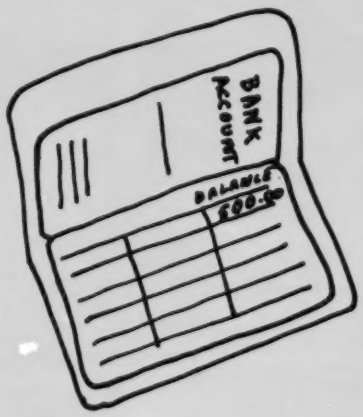
Medium of Exchange

Measure of Value



Store of Value





WORKSHEET: COUNTERFEITING

Basic to our study of economics is the concept that people have unlimited needs and wants. In other words, we are all faced with the problem of satisfying our needs and desires. The problem is partly solved if we have items of value that can be exchanged for other items. In our society paper money and metal coins work very efficiently in obtaining the goods and services that we need and want. This is so because either type of money is accepted as (1) a medium of exchange, (2) a store of value, and (3) a measure of value.

(1) Because money is valuable, we are faced with another problem. How do we obtain money? On the following lines list as many ways as you can to obtain money.

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

(2) Have you ever wished that you were rich and had an unlimited supply of money? Circle one: yes – no.

(3) Have you ever thought how easy it would be to make your own $5, $10, or $20 bills? Circle one: yes – no.

(4) List the materials needed to counterfeit money.

_____

_____

_____

(5) What does it mean to counterfeit money?

_____

_____

_____

COUNTERFEITING

(6) Imagine that you are making counterfeit money. What are some benefits of making your own money? List three.

_____

_____

_____

(7) What are some costs or possible costs to you of making your own money. List three. You may wish to review the concept of opportunity cost with your instructor.

_____

_____

_____

Some benefits may include greater accessibility to goods and services. Of course, an obvious cost is the possibility of getting caught and facing trial and imprisonment.

How easy is it to counterfeit and get away with it? Read the case below.

Fred and Frita were junior high students at High Roller Junior High in Fat City. They both had the same class in printing, a shop course where students learn how to design and make their own original posters, birthday cards, stationery, etc.

Both Fred and Frita had a desire to accumulate as many goods as possible, as soon as possible. Money, however, was scarce at their ripe but innocent age.

(8) What did they do? Guess.

_____

_____

(9) What would you do, given this situation?

_____

_____

COUNTERFEITING

One day Frita got this brainstorm. "Hey, Freddy baby," she ventured, "how about you and me going into business together?" Fred was interested. Frita continued, "With all this printing equipment here, we could copy a twenty-dollar bill onto a plate and produce scads of money!"

Fred replied, "Oh, Frita, you're so marvy!"

So, the industrious duo set to work. First, using the school's expensive equipment, they photographed an image of a real $20 bill onto a special photographic printer's plate. Then they got some fine off-white paper and some black and green ink. By the end of the first week's production Fred and Frita had printed, cut, and touched up 100 of these counterfeit bills.

"Looks kind of like real money," said Fred, "except for the blemishes on Jackson's face." "It even feels good," he continued. Oh well, although their counterfeit bills weren't perfect, Fred and Frita were sure they would pass for the real thing. I mean, how many people actually check out and scrutinize every bill they get? They probably look at the amount and that's it.

Fred and Frita couldn't wait to spend their money. They each bought food, stereos, new ten-speed bikes, competition skateboards, tickets to the Silly Savages concert — the spending never stopped until . . . .

One Saturday, while at Frita's house listening to her big stereo, Fred and Frita heard a knock on the door. It was the Secret Service. The Secret Service agents informed Fred and Frita that they were being taken to the Secret Service's offices for questioning.

(10) How did the Secret Service know Fred and Frita's money was counterfeit? What characteristics of a dollar would you look closely at to see if it were counterfeit? List four.

_____

_____

_____

_____

COUNTERFEITING

(11) Now check your counterfeit-detecting ability by reading "Genuine or Counterfeit?" What characteristics of a bill do the Federal Reserve people use for detecting counterfeit money? List four.

_____

_____

_____

_____

Genuine or Counterfeit?

Most industries focus their research programs on finding easier ways to manufacture their products, but security printers are constantly concerned with developing more difficult and more intricate methods. Genuine currency is distinctive because it is made through a detailed process with special paper and ink. The complicated and careful procedures not only make the currency durable, but also provide protection against counterfeiters.

The most persistent problem for counterfeiters, even with the latest technological knowledge, is the unique style of the artist transmitted to each note in the engraving process. United States currency notes are printed by the engraved intaglio steel plate method, and each feature of the design—portrait, lettering, scrollwork, and the lacy geometric patterns—is done by an artist expert in his particular field. No photography enters into the creation of an engraved note, so that a camera can only picture a note and not make an actual duplication of it. A counterfeiter knows a perfect counterfeit—one that would fool an expert—is practically impossible, so he must adopt a more modest objective. He tends to rely on his camera to produce work that will deceive an inattentive person.

Specially made paper is another important protection against counterfeiters. Its quality is far higher than paper generally available to the public and presents a difficult problem to would-be wrongdoers. Money paper has a particular feel, strength, a good appearance, and printability; it should have long life.

Can you spot a counterfeit? Perhaps the following suggestions, from the United States Secret Service, will show you how it is done.

1. STUDY genuine currency. Look closely at the workmanship of the features.
2. PAPER used for genuine notes is very high quality. Small red and blue threads are in it, but may not be visible if the bill is badly worn or dirty. Counterfeit paper may feel different, or may be whiter than genuine paper. Threads may be imitated by fine red and blue lines made by a pen.
3. RUBBING a bill on a piece of paper is not a good test. Ink can be rubbed off genuine as well as counterfeit notes.
4. CONSULT an experienced money-handler if in doubt—a bank teller, for example.
5. IF YOU GET A COUNTERFEIT BILL...
   - Write your name and the date on the back of it, so you can identify it later.
   - Write down all the details about how you got it; WHO gave it to you? WHERE did you get it? WHEN did you get it?
   - Contact the nearest U.S. Secret Service office, the local police, a commercial bank, or any Federal Reserve Bank.

   Anyone convicted of passing a counterfeit may be fined as much as $5,000, imprisoned for up to 15 years, or both.

Genuine		Counterfeit
Stands out sharply from background. Eyes appear lifelike. Background is a fine screen of regular, unbroken lines.	Portrait	May merge with background. Eyes, etc., may be dull or smudgy. Background may be dark, with some irregular and broken lines. Face may seem unnaturally white.
Saw-tooth points around rim are even and sharp.	Seal	Saw-tooth points may be uneven, blunt, or broken.
Figures are firmly and evenly printed, well spaced. On Federal Reserve Notes, prefix letter always agrees with district letter in seal.	Serial Numbers* F 93310058 A B86733513 A	May be out of line, poorly spaced, printed too light or too dark. Prefix letter may not agree with district letter in seal.
Fine crisscrossing lines are sharp and unbroken.	Scrollwork	Lines may be blurred and are often broken.

*Although shown in black here, serial numbers on Federal Reserve Notes, the most common type of U.S. paper money, are in green. Serial numbers on United States Notes are in red. Treasury regulations prohibit reproduction of these portions of currency in color.

FINANCIAL TRANSACTION SURVEY FORM

Name _____

Section _____

The following questions should be asked of the head(s) of your household.*

1. Do you have a checkbook? Yes____/__ No_____
2. What percent of the household monthly bills are paid using cash? _____%
3. What percent of the household monthly bills are paid by check? _____%
4. How many credit cards do you possess? _____
5. What percent of the monthly household expenditures are charged using a credit card? _____%
6. What percent of expenditures charged are eventually paid for by check? _____%
7. Are you paid by having your checking and/or savings account electronically credited?
   Yes_____ No_____
8. List the items which are electronically deducted from your paycheck:
   a. _____ d. _____
   b. _____ e. _____
   c. _____ f. _____

*All questions that pertain to income ask for percentages instead of actual amounts in order to guarantee the respondent's privacy.

1. Which of the following describes a barter economy?

   a. People must pay cash for all goods and services.
   b. People must buy all goods and services from the government.
   c. People must obtain goods and services by trading.
   d. People have to argue about the value of goods and services because there are no fixed prices.

2. Under which of the following circumstances would seashells be considered money?

   a. If you said they were money.
   b. If you could buy something with them.
   c. If they were very rare.
   d. If they were difficult to counterfeit.
   e. All of the above are necessary.

3. Write a definition of money:

   _____

   _____

4. List the three functions of money and give an example of each:

   1. _____

      Example: _____

   2. _____

      Example: _____

   3. _____

      Example: _____

5. Mort Mortar only has bricklaying services to trade for a used car he needs desperately. Which of the following is true?

   a. Mort Mortar is assured of getting the car he wants as long as he is willing to trade enough bricklaying.
   b. Mort Mortar cannot trade his bricklaying for a canoe and then trade the canoe for a used car.
   c. Mort Mortar can choose the car he wants and offer his bricklaying services to the seller.

6. In what way does the above example illustrate the inefficiency of barter in a complex economic system?

   a. Mort Mortar's choice of cars to buy is limited.
   b. Mort Mortar's task of getting a used car may be very time-consuming.
   c. More than two people and more than one trade may be required before Mort gets his used car.
   d. Mort may not be able to get the used car he wants.
   e. All of the above

7. Why doesn't barter work in a modern and complex society?

   a. It is impossible to exchange goods and services through barter.
   b. It is cumbersome to accumulate wealth in the form of goods and services.
   c. People value goods and services differently.
   d. a and b
   e. b and c

8. What is an important reason why using only coin as money would be inefficient in today's economy?

   a. Coin is heavy to carry around in large amounts.
   b. The supply of money would depend on discoveries of precious metals.
   c. Coin is difficult to store in large quantities.
   d. All of the above.

9. List the four ways modern financial transactions are made:

   1. _____

   2. _____

   3. _____

   4. _____

10. In electronic exchange of money:

   a. Checks are written; no credit cards are used.
   b. No checks are written; computers debit and credit accounts.
   c. No cash changes hands; credit cards are used.
   d. Cash changes hands; computers debit and credit accounts.

Section II Bank Services and Functions

About This Section . . .

Commercial banks and other financial institutions are vital parts of our economic system. They provide numerous services which, at least indirectly, affect the lives of every secondary school student. The activities of Section II give students an overview of financial services with emphasis placed on the unique functions of the commercial bank.

Generalizations:

- An efficient commercial banking system serves a modern economy by providing (1) security for deposits, (2) loans for individuals and businesses and (3) a system for transferring payments of money.
- The commercial banking system provides a mechanism through which the savings of individuals are rechanneled in the form of loans and investments to businesses and individuals to facilitate economic growth.

Activity 1 - Brainstorming: "Bank" Services

OUTCOME: Students will make a list of services provided by financial institutions.

Brainstorming/Discussion *Time: 15 min.*

Activity Instructions:
Lump all financial institutions under the heading "banks" on the chalkboard. Ask the students to list as many "bank" services as they can on a blank sheet of paper. After a few minutes of individual brainstorming the class, led by the instructor, should compile a master list of "bank" services using student ideas.

Encourage the class to ask questions. Discuss each suggestion before it is added to the list. The teacher could ask for definitions and explanations of the services. At this point, it is not important that students know the differences between commercial banks, savings and loan associations, credit unions, and other financial institutions.

Activity 2 - Surveying Financial Services

OUTCOME: Students will discover which services are provided by various local financial institutions and learn indirectly how banks make a profit.

Survey *Time: 30 min.*

Materials Needed:
Financial Institution Survey Form

Activity Instructions:
The instructor should emphasize that financial institutions are businesses. As businesses, they provide goods and services to their customers. Using the "Financial Institution Survey Form," students are to contact various local financial institutions and record the services they provide.

Distribute the survey form and explain its format. Instructors may decide, depending on the characteristics of their students, the time allowed, and the number of financial institutions in the vicinity, how many institutions each student or group of students should contact. Suggest ways students may find names of financial institutions to contact (Yellow Pages, etc.) or assign specific institution(s) to each student or group of students. You may want to notify these institutions of the forthcoming project and perhaps arrange times so they can have personnel ready with the desired information.

The class should write a brief paragraph explaining the purpose of the survey and introducing themselves. This can be shown or read to representatives at the institutions they contact. Tell students to record the name, address, and phone number of the institution(s) they contact and the name(s) of the person(s) with whom they speak.

Activity 3 - Summarizing Financial Services

OUTCOME: Students will differentiate between a commercial bank, a savings bank, a savings and loan, and a credit union, and generate ideas about how financial institutions make a profit.

Transparency/Discussion *Time: 45 min.*

Materials Needed:
Transparency #1 - "Financial Institution Survey Form"

Activity Instructions:
Utilizing Transparency #1, the instructor should help the class compile a master checklist of all services performed by the financial institutions. The class may be divided into small groups, if the instructor desires. Then, the students should discuss the following questions:

1. What are the advantages and disadvantages of each type of financial institution?
2. Which of the services offered have you used? Your parent or guardian used?
3. Which financial institution would you go to if you wanted a checking account? A savings account? To obtain a home loan? To obtain a personal loan? Etc.
4. Why do the interest rates charged for different types of loans vary?
5. How do the various financial institutions make a profit?

Activity 4 - The Evolution of Money and Banking

OUTCOME: Students can explain how money and banking have changed through the years and why a central banking system is needed.

Filmstrip/Discussion *Time: 30 min.*

Materials Needed:

Filmstrip - The Role of the Commercial Banking System (Part 1-"The Evolution of Money and Banking")
(See "Additional Materials")

Cassette filmstrip projector

Activity Instructions:

The filmstrip provides a good transition from the topic of money to that of banking. It is suggested that the instructor list the questions below on the chalkboard before viewing the filmstrip.

- How has "money" changed in form and in function over the years? [Before there was money, there was a barter system. The types of money used over the years were commodity money, then gold and silver, then paper money, then deposit money or checkbook money. Recently, credit cards and electronic funds transfer have permitted financial transactions without the use of money (though this is not discussed in the filmstrip).]
- Why was there a need for a strong central banking system before 1913? [The present banking system was too weak to handle the demands of a rapidly growing economy.]
- What does the Federal Reserve System do? [It (1) holds required reserves for member banks, (2) provides an "elastic currency," (3) provides a check collection system, (4) makes short-term loans to member banks, and (5) regulates the supply of money and credit.]
- What services do commercial banks offer? [They (1) accept and safeguard funds, (2) facilitate transfer of funds, and (3) provide credit for an expanding economy by granting loans.]

After viewing the filmstrip, the students should be encouraged to discuss the answers to the questions as a class. Students should take notes on the answers so that their information can be as complete as possible. Notes can be either handed in or kept by students.

Activity 5 - Circular Flow of The Economy

OUTCOME: Students will show relationships between financial institutions, industry, consumers, and government in our economic system.

Model Drawing/Transparencies *Time: 45 min.*

Materials Needed:

Transparencies #2, #3, and #4 - "Model of the American Economic System"

Activity Instructions:

In this activity the students will conceptualize the flow of money through the economy. The day before this activity takes place direct the class to think about where their money and other people's money goes to and comes from. This could be used as a short written assignment. Stress an awareness of the roles of the consumer, producer, government, and financial institutions.

Transparencies #2, #3, and #4 will be used to stimulate student thinking about the flow of money through the economy. Show Transparency #2 with symbols representing "Producer" and "Consumer." The four "flows" of "Goods and Services," "Income," "Land, Labor, Capital, and Time," and "Spending" are listed for the students to diagram using arrows to show relationships between the primary segments. Give students the opportunity to discuss their drawings and give explanations.

Transparency #3 shows the correct placement of the first four flows and adds the primary segments of "Government" and "Financial Institutions." Answer any questions about the placement of the flows between the "Producer" and "Consumer." Eight more flows are listed for the student to diagram. Discuss drawings. Make any modifications or changes students see necessary for accuracy.

Transparency #4 shows the complete model of the American Economic System.

Teacher Option:

Students can draw their own models on a sheet of paper, or the activity can be conducted as a class discussion with students diagraming the various flows on the chalkboard. You may wish to give students a list of the primary segments and all of the flows and let them draw their own models before going through the transparency series.

Activity 6 - How is a Commercial Bank Different?

OUTCOME: Students will list the three functions of a commercial bank and explain the importance of the lending and clearinghouse functions.

Reading/Worksheet *Time: 60 min.*

Materials Needed:
Reading #1 - "Commercial Banking"
Worksheet: - Commercial Banking

Activity Instructions:
Students should be given Reading #1 and "Worksheet: Commercial Banking." The time required to complete this activity will vary with the reading ability of the students. If students have poor reading ability, the reading could be placed on tape. The instructor should review the reading and worksheet, stressing the three major functions of commercial banks: (1) to hold time deposits and demand deposits for their customers, (2) to make loans and investments, and (3) to serve as a clearinghouse in the transfer of money.

Note to Instructor:
The student has just been introduced to the generalization that commercial banks can (1) keep money working in the economy by issuing loans and (2) transfer money through the use of checking accounts. These are two difficult concepts, and they deserve further explanation. But should the clarifying activities be presented before or after the concept of the Federal Reserve System has been introduced? Because of the influence the Federal Reserve System has upon loans and money transfer, the authors have chosen to introduce the "Fed" in the next section. Section IV develops the concept of money transfer, and Section V explains how banks create money through loans.

FINANCIAL INSTITUTION SURVEY FORM

Name_____

Services:	Financial Institutions: Bank	S&L	Credit Union	Private Loan Co.	Other
Savings Accounts (indicate interest rate(s))					
Checking Accounts					
Home Loans (indicate interest rate(s))					
Business Loans (indicate interest rate(s))					
Personal Loans (indicate interest rate(s))					
New & Used Auto Loans (indicate interest rate(s))					
Home Improvement Loans (indicate interest rate(s))					
Investment Adviser					
Trustee and/or Executor of Estate					
Traveler's Checks					
Foreign Money Exchange					
Drafts					
Cashier's Checks					
Wire Transfer of Funds					
Safe-Deposit Boxes					
Others (specify)					

Instructions:

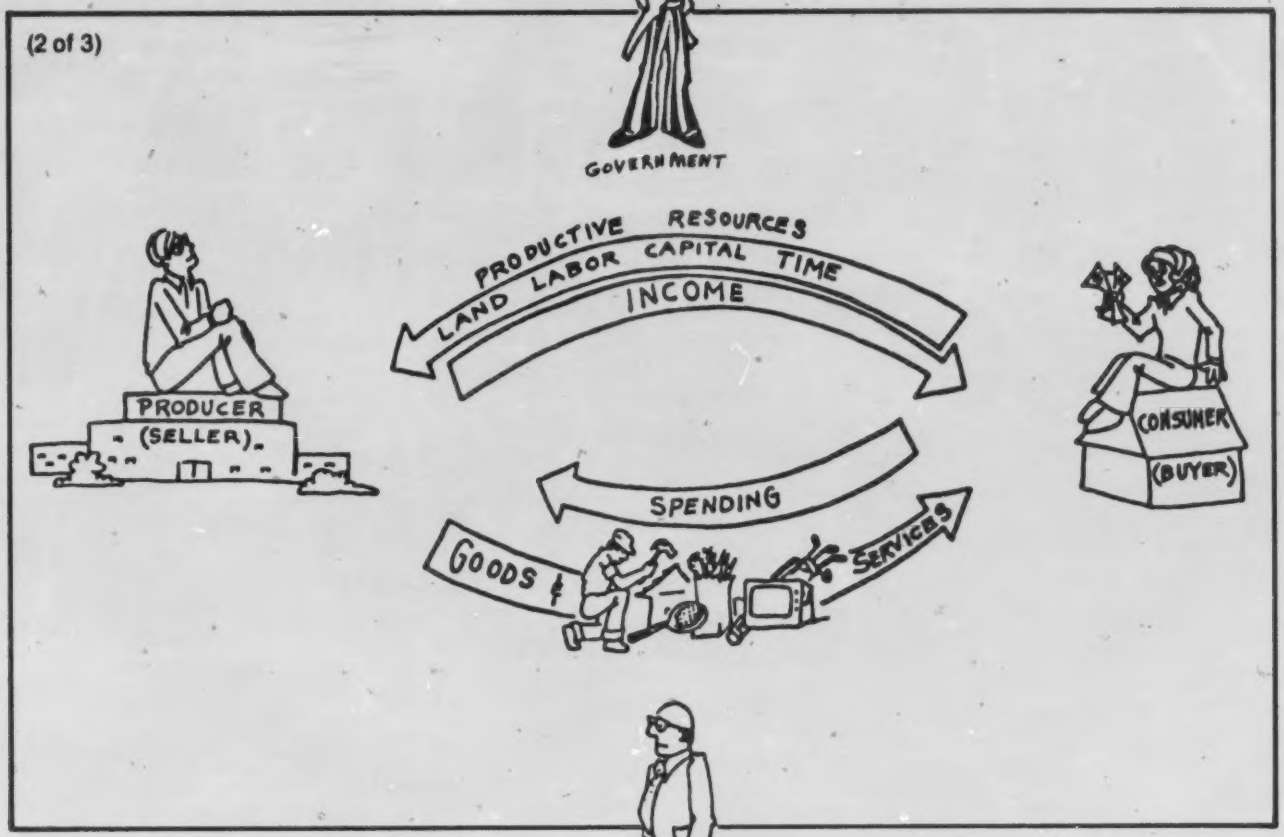
Visit or phone one or all of the above financial institutions. Identify yourself as a student obtaining information for a school project. Explain that your project involves completing a survey form on services offered by financial institutions and that you'd also like to list interest rates paid and charged for savings accounts and loans.

Financial Institution Survey Form

Services:	Financial Institutions				
	Bank	S&L	Credit Union	Private Loan Co.	Other
Savings Accounts (indicate interest rate(s))					
Checking Accounts					
Home Loans (indicate interest rate(s))					
Business Loans (indicate interest rate(s))					
Personal Loans (indicate interest rate(s))					
New & Used Auto Loans (indicate interest rate(s))					
Home Improvement Loans (indiate interest rate(s))					
Investment Adviser					
Trustee and/or Executor of Estate					
Travelers Checks					
Foreign Money Exchange					
Drafts					
Cashier's Checks					
Wire Transfer of Funds					
Safe Deposit Box					
Others - Specify					

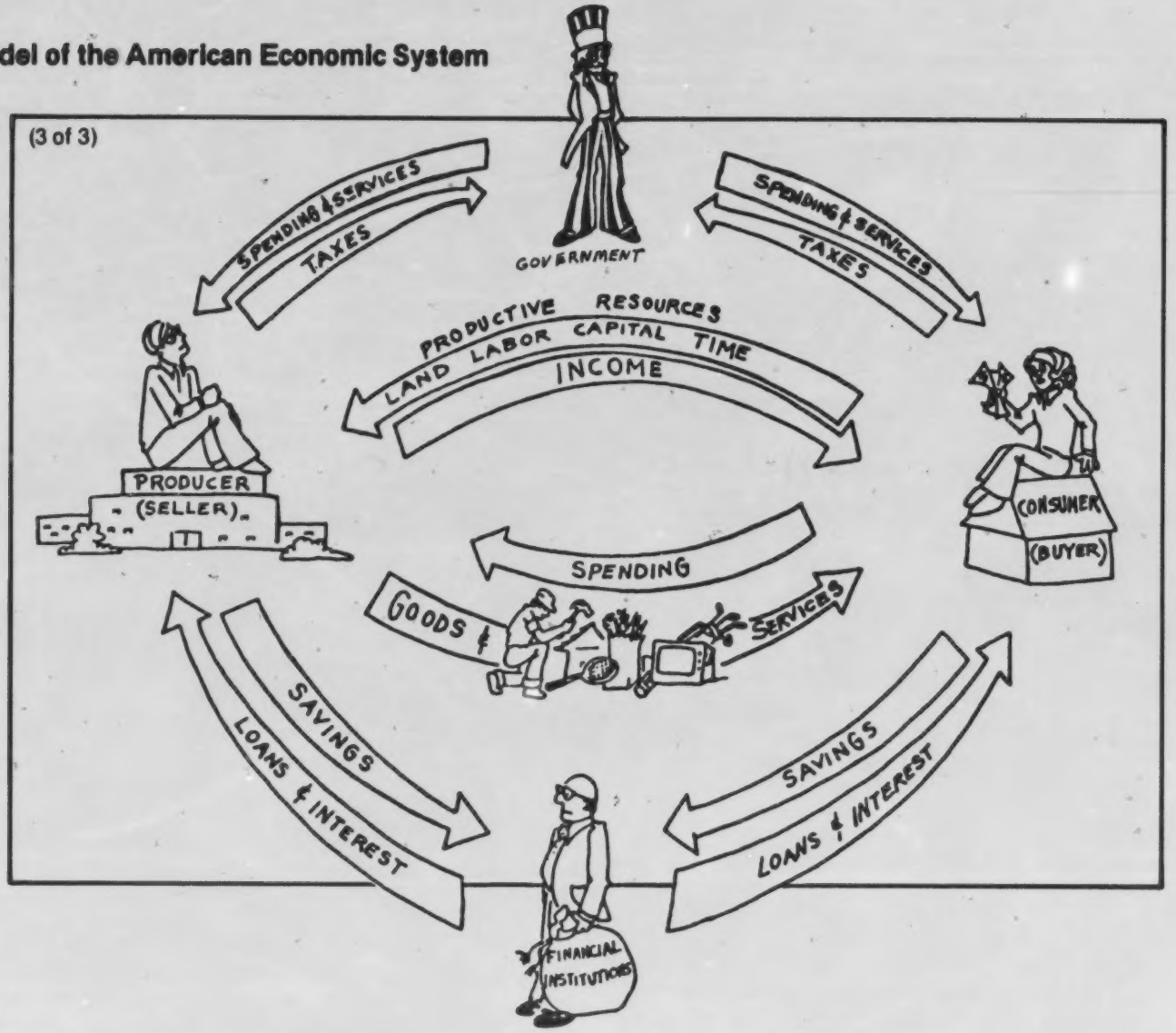
(1 of 3)

Goods & Services
Income
Land, Labor, Capital, Time
Spending



Taxes	Spending & Services
Taxes	Spending & Services
Savings	Loans & Interest
Savings	Loans & Interest

Model of the American Economic System



COMMERCIAL BANKING

Commercial banks are important financial institutions. The orderly operation of our modern economic system depends upon the functions performed by these banks. What are these functions and why are they important?

Major Functions of Commercial Banks

1. Commercial banks accept and hold their customers' deposits. Commercial banks are the only type of bank that hold demand deposits. Demand deposits are deposits that can be withdrawn without advance notice. They are also referred to as "checkbook money" or checking accounts. To withdraw demand deposits you merely write a check. A check is a written order to transfer funds from your account to an individual or institution requiring payment. Because they can be withdrawn at any time, no interest is paid on demand deposits.

   Time and savings deposits are two forms of savings accounts. Time deposits hold funds which are deposited for a period of time, such as one or two years. Savings deposits (e.g., passbook savings) are sometimes more convenient because you can make deposits and withdrawals at will, although you can by law be required to wait 30 days to receive your money. Time and savings deposits earn interest. They are the only types of deposits held by savings banks or savings and loan associations, while commercial banks also offer time and savings accounts as a convenience to their checking account customers.

2. Commercial banks make loans. Commercial banks earn money in two main ways: by investing and lending out some of their deposits. A businessperson who needs to purchase new merchandise for the coming season can pledge his/her inventory or other assets to secure a loan from a bank. Interest must be paid on the loan, but this is still more efficient and profitable than selling the inventory or other assets at a loss to

finance the purchase. By securing a bank loan, the businessperson can purchase the new stock and repay the loan within a specific time period. The interest charges are sometimes subtracted immediately from the principal, the amount of money the borrower receives as a loan. For instance, a person taking out a $100 loan could receive only $88 because of a $12 interest charge. This is called "discounting the note." If the loan is not discounted, the amount of the loan plus interest is repaid either at the end of the loan period or in monthly installments.

3. Commercial banks transfer checkbook money. In order for checks to be an efficient means of receiving and making payment, there has to be a system for check collection. A businessperson receiving a check for payment deposits it at his/her commercial bank. The commercial bank, in turn, sends it to a "clearinghouse" or a Federal Reserve Check Processing Center. There the check is sorted and delivered to the bank whose name appears on the check. The account of the person who wrote the check is debited (the check amount is subtracted from the balance). Similarly, the businessperson's money is collected by the commercial bank and his/her account is credited (check amount is added to the balance). Now the businessperson can, in turn, pay bills by writing checks on his/her account. By acting as a clearinghouse--that is, by collecting checks and transferring funds from one account to another--commercial banks make checkbook money an efficient medium of exchange. They shorten the time funds are not working in the economy for individuals and businesses.

Importance of Commercial Bank Functions

Through loans, commercial banks direct savers' deposits to where they are needed. When individuals, institutions, or businesses have extra money, banks lend it to others for investment and spending. Money, then, does not lie idle when it can be used by someone else and add to the productivity of the economy. The commercial bank, along with other financial institutions, makes possible the use of available funds in the economy.

WORKSHEET: COMMERCIAL BANKING

Name_____

1. The three major functions of commercial banks are . . .

   a.

   b.

   c.

2. What is a demand deposit?

3. What is a time deposit?

4. What is a check?

5. Commercial banks earn money by . . .

   a.

   b.

6. What does it mean to "discount the note"?

7. Commercial banks are important because they . . .

   a.

   b.

1. In what way does a commercial bank differ from a savings bank?

   a. A commercial bank does not take savings accounts.
   b. A commercial bank does not make loans.
   c. A commercial bank deals only with businesses.
   d. A commercial bank takes checking accounts.

2. What is not a function of a commercial bank?

   a. Providing checking accounts to customers
   b. Making loans to businesses and individuals
   c. Regulating the money supply in the U.S.
   d. Collecting checkbook money through a clearinghouse

3. What is not a function of a central bank?

   a. Makes loans to member banks
   b. Offers high-interest savings accounts to the public
   c. Provides a national clearing system for checks
   d. Distributes currency and coin to banks

4. Which of the following is a primary source of income to a bank?

   a. Rental of safe-deposit boxes
   b. Sale of money orders, traveler's checks, and savings bonds
   c. Interest it earns on loans
   d. Service charges on checking accounts

5. Demand deposits:

   a. Earn interest.
   b. Can be withdrawn at any time by writing a check.
   c. Make up a small percentage of our money supply.
   d. All of the above

6. Time deposits:

   a. Earn interest.
   b. Can be withdrawn at any time.
   c. Are held only by savings banks.
   d. All of the above

7. A commercial bank:

   a. Pays customers a higher interest on savings accounts.
   b. Provides customers with only checking accounts.
   c. Provides customers with both checking and savings accounts.
   d. Grants only short-term loans such as a new car loan.

8. Which of the following make up most of the money supply at any one time?

   a. Coins
   b. Demand deposits
   c. Paper money
   d. Credit cards

9. If a loan is <u>discounted</u>:

   a. Interest charges are subtracted from the principal at the time the loan is made.
   b. The loan is granted at an interest rate lower than the normal lending rate.
   c. It has not been repaid by the borrower as agreed.
   d. The bank has decided not to collect on the loan.

Section III The Federal Reserve System

About This Section . . .

The Federal Reserve System (the "Fed") was created by an act of Congress in 1913 to serve as the central bank of the United States. This section first examines the problems in our banking system before the organization of the Federal Reserve System. It then discusses the purposes, the functions, and the organization of the Federal Reserve System. It emphasizes the Fed's independent, quasi-governmental structure in regulating the money supply in a free economic system. If the Fed were less independent, short-term pressures could prevent it from achieving its long-term policy objectives.

Generalizations:

- The Federal Reserve System was established to clear checks and provide loans to banks. Its major function now is to regulate the supply of money.
- The Federal Reserve System is an independent, quasi-governmental agency.
- The Federal Reserve System consists of 12 regional Reserve Banks and 25 branch banks, supervised by a Board of Governors in Washington, D.C.
- Regional Reserve Banks provide member commercial banks with numerous services: supplying coin and currency, providing safekeeping facilities, functioning as regional check collection centers, and making short-term loans.

Activity 1 - Bank Panic

OUTCOME: Students generate ideas about what the causes and effects of mass withdrawals of bank deposits could be.

Transparency/Discussion *Time: 15 min.*

Materials Needed:
Transparency #1 - What Is Happening Here?

Activity Instructions:
Show students Transparency #1. Ask them to think about what is happening in the photograph and why. Allow several minutes for students to study the photograph and then discuss with them the following questions:

- What could influence people to withdraw their money? [*Economic reasons*—a recession, unemployment, lack of credit, more attractive investment opportunities; *seasonal or temporary conditions*—spring planting, droughts, bad harvests, purchase of new inventories, lags in consumer spending, excessive and unusual spending needs; *psychological and emotional reasons*—concern for safety of funds, distrust of banks, influence of withdrawals on other depositors.]
- Who would be hurt by mass withdrawals? [Everyone! The depositors would lose their money, creditors would not get paid, the bank would go out of business, employees would lose their jobs, stockholders would lose their investments, a chain reaction may be set off causing mass withdrawals in other banks, and the economic activity of the community would be depressed.]
- What would happen to a bank if every person wanted to withdraw his/her money? [The bank could not honor everyone's demands for money. We have a fractional reserve system; banks hold only a fraction of a person's deposits as reserves. Most of the deposits are invested in securities or loans that cannot be quickly converted to cash. If every depositor tried to withdraw his/her money, there wouldn't be enough cash on hand at the bank. The bank could go bankrupt and be forced to close, unless a central bank like the Fed granted it a short-term loan. During the bank panic of 1907, there was no central bank and many commercial banks failed.]

Activity 2 - Why Was the Federal Reserve System Created?

OUTCOME: Students can identify expanding the supply of currency, requiring reserves, and making short-term loans as ways the Federal Reserve System can help prevent bank failures.

Reading/Transparency/Discussion *Time: 45 min.*

Materials Needed:
Reading #1 - "Early Problems of Our Money and Banking System"
Transparency #2 - "Sam's Bank"

Activity Instructions:
Distribute Reading #1 to students. After students have read it, show them Transparency #2. Referring to the figures shown for "Total Deposits," "Total Loans," and "Cash Reserves," have students answer the four study questions listed on the transparency.

During a follow-up discussion of "Sam's Bank," the instructor can elaborate on the concept of "cash reserves." Whereas Sam has to borrow money only when his cash reserves are exhausted (Question 4), a member bank is required, by law, to hold *at all times* a certain percentage of its deposits as reserves.

It is very unlikely that all depositors would need their money on the same day (Question 3). In fact, deposits usually offset withdrawals on any given day. But if depositor demand for cash exceeds cash deposits (Question 2), a member bank would have to dip into its reserves. Since the bank must hold a certain amount of cash reserves, either in its vault or at the Federal Reserve, these could be used to meet withdrawals. If the bank's reserves were not adequate to meet the withdrawals, a member bank could borrow from a Federal Reserve Bank the amount by which withdrawals exceeded deposits (Question 4). In addition, because nearly all banks have deposit insurance from the Federal Deposit Insurance Corporation, individuals do not have to worry that insured banks will be unable to pay out deposits. Thus, the Federal Reserve System and the FDIC can prevent a loss of confidence in banks, bank panics, and bank "failures."

Activity 3 - The Structure of the Federal Reserve System

OUTCOME: Students can list the benefits of the central bank of the U.S. being *decentralized* and an *independent*, quasi-governmental agency.

Transparencies/Discussion/Lecture *Time: 45 min.*

Materials Needed:
Transparency #3 - "The 12 Federal Reserve Banks"
Transparency #4 - "Federal Reserve System"

Activity Instructions:
Show students Transparency #3. Ask them to think about why the creators of the Federal Reserve System set up 12 regional Reserve Banks instead of just one centralized bank. See if students can come up with some of the reasons the founders had for decentralizing the Federal Reserve System: they were leery of *one* central bank becoming too powerful an institution; our country is so large that it is more efficient to have regional banks serve the member banks; and regional banks are better qualified to study and analyze their particular economic conditions and provide regional input into national policy decisions.

Using Transparency #4 and the explanations below, explain to students the pyramid structure of the Federal Reserve System. Emphasize that it is an *independent*, quasi-governmental agency. Founders of the Federal Reserve System were concerned that the power to control the money supply not serve political interests. They also were concerned that it not be so unregulated that it would serve special interests of the banking and financial community. Its policies and actions must be dictated solely by the needs of the economy. Students should take notes during the lecture for use in a later activity.

Member Banks

At the base of the pyramid are the nearly 6,000 commercial banks that are members of the Federal Reserve System. All national banks must be members; state banks have the option to join. All member banks must hold specified reserves against deposits and comply with Federal Reserve regulations. The advantages of being a member of the Federal Reserve System include borrowing privileges, the use of the System's check collection facilities, free transportation for currency and coin purchases from the Fed, wire transfers of funds, and examinations by Federal Reserve bank examiners. Even though less than half of the nation's commercial banks belong to the Federal Reserve System, member banks hold about 75% of all commercial bank deposits.

Regional Reserve Banks

Making up the next level of the pyramid are the 12 regional Reserve Banks and their 25 branch banks. Branch banks serve a particular area within a district.

Each Reserve Bank has a Board of Directors whose primary responsibility is to provide grass roots information about district economic conditions. There are three "Class A" directors who are bankers and three "Class B" directors who are engaged in agriculture, industry, or commerce. These six directors are elected by the member banks in the district. Large, medium, and small banks each elect one director from Class A and one from Class B. Three "Class C" directors are appointed by the Board of Governors, the governing body of the Federal Reserve System, and cannot be directors, officers, employees, or stockholders of any bank.

The Reserve Bank president is appointed by the Board of Directors of each regional bank. The president represents the Federal Reserve Bank and its district at the monthly meetings of the Federal Open Market Committee, the most important policy-making body of the Federal Reserve System.

Board of Governors

At the peak of the pyramid is the Board of Governors in Washington, D.C. This body consists of seven members appointed by the President of the United States with the advice and consent of the U.S. Senate. They serve 14-year terms and cannot be reappointed. No two members can be from the same Federal Reserve district. The President also designates a chairman and a vice-chairman to serve four-year terms. They can be redesignated. The Board's main function is the formulation of monetary policy. They serve on the Federal Open Market Committee, along with the presidents of the Reserve Banks.

Activity 4 - The Three Roles of the Federal Reserve System

OUTCOME: Students can explain the Federal Reserve functions as (1) U.S. central bank, (2) fiscal agent for U.S. Treasury, and (3) a banker's bank.

Reading/Worksheet/Discussion *Time: 45 min.*

Materials Needed:

Reading/Worksheet #2 - "The Roles of the Federal Reserve System: Central Bank, Fiscal Agent, and Banker's Bank"

Dictionary

Activity Instructions:

Distribute to students Reading/Worksheet #2. Work through the assignment as a class or let students work on it individually. The worksheet format will facilitate active participation and the use of previously learned concepts. Students should fill in the blanks (review) and answer questions as they go. Notes from the transparency/lecture in Activity 3 may be needed to complete the worksheet. Discuss student ideas when appropriate or if the worksheet is done individually, discuss it upon completion. Stress that the Federal Reserve Bank's most important role is that of a central bank, although the services it provides are also vital to the orderly operation of our money and banking system.

What Is Happening Here?

Minnesota Historical Society

EARLY PROBLEMS OF OUR MONEY AND BANKING SYSTEM*

Before there was a Federal Reserve System, the United States had no way to adjust its supplies of money to changes in business activity. The amount of currency was tied to government security issues.

Banks often were short of cash. People who deposited money in a bank had a legal right to withdraw it if they chose. Banks would keep part of their deposits on hand as "reserves." They also had deposits in other banks that could be exchanged for cash if needed.

Sometimes the demand for currency was greater than the amount of money a bank had on hand. The bank would then draw on its deposits in other banks or sell its other assets such as government securities. This would often cause a chain reaction of money shortages in a number of banks.

When a bank could not meet its demand for currency, it "failed" and had to close. Bank closings brought on periods of economic depression called "money panics" because panicky depositors, who had lost confidence in banks, demanded their money. In many cases, a bank that failed was perfectly sound. If given more time, it could have gotten enough cash to meet its customers' needs.

With the 1907 panic, Congress began studying the U.S. money system. It found that nearly all countries whose money supply could expand or contract (depending on people's preference to hold more or less currency) had some form of a central bank. These central banks had the power to issue currency in the quantity needed. As a result of this and other studies, the United States Congress passed the Federal Reserve Act of 1913 creating the Federal Reserve System.

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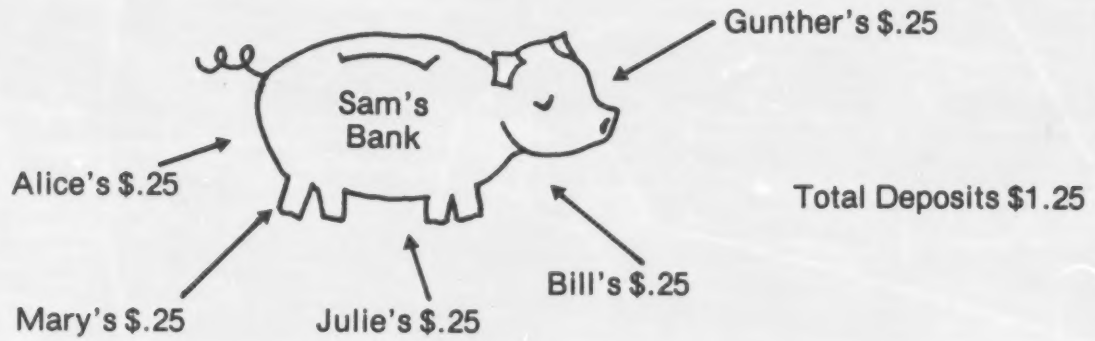
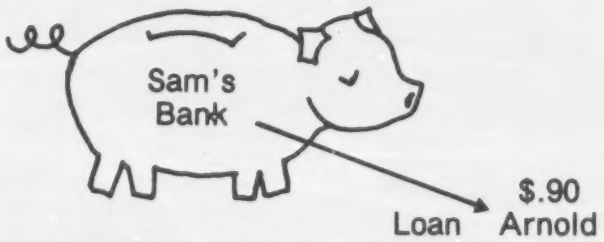
*Adapted from Your Money and the Federal Reserve System, Federal Reserve Bank of Minneapolis, 1976.

Sam's Bank

On Monday, five of Sam's friends deposit $.25 each in Sam's piggy bank for safekeeping.



Sam loans Arnold $.90 on Tuesday.
Arnold promises to pay back $1.00 on Friday.



What would happen if each of the five depositors wanted to withdraw $.05 each?

What would happen if two depositors wanted to withdraw all their money on Thursday?

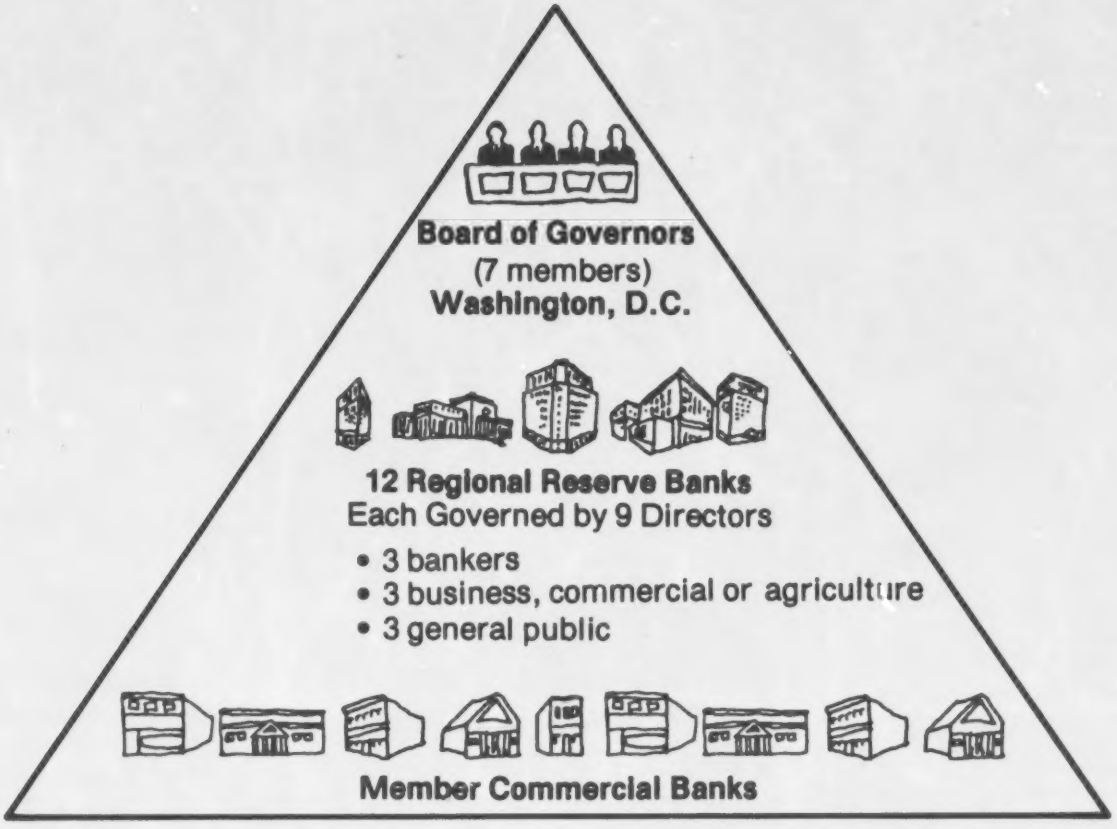
What is the probability that all depositors would want to withdraw their money on the same day?

How would the Federal Reserve System help Sam if two depositors wished to withdraw all their money on Wednesday? (Assume that Sam's Bank is a member bank.)

The 12 Federal Reserve Banks

*Alaska and Hawaii are also under the jurisdiction of the Federal Reserve Bank of San Francisco.

Federal Reserve System



Since 1913, the Federal Reserve System has functioned as the central bank of the United States.

As a central bank, the Federal Reserve System manages the money supply of the U.S. by influencing the lending activity of commercial banks.

The process of influencing the money supply is called MONETARY POLICY.

The structure of the Federal Reserve System is designed to be as nonpolitical as possible.

The Board of Governors plus 12 heads of Regional Reserve Banks meet once a month to decide on Federal Reserve Monetary Policy.

THE ROLES OF THE FEDERAL RESERVE SYSTEM: CENTRAL BANK, FISCAL AGENT, AND BANKER'S BANK

The Federal Reserve System ("The Fed") plays several roles as it carries out the functions given it by the Federal Reserve Act of (1)_____. Its most important role is that of being the central bank of the United States. As our central bank, the Federal Reserve System provides for an (2)_____ currency supply—one that can expand or contract depending on the needs of the economy. Through its monetary policy, the Fed regulates the supply of (3)_____ in the United States.

In addition to this important central bank function of setting (4)_____ policy, the Federal Reserve System provides many services. As you learned in Activity 2, the Federal Reserve System is not a regular government agency but is an independent, (5)_____ agency. It is responsible to Congress and the people, but it makes decisions and takes action without direct approval from the President or Congress. In its second role as fiscal agent the Federal Reserve System provides services to the government. Specifically, the Federal Reserve System represents the U.S. Treasury and performs the following services for it:

1. Handles its checking account (issues tax refund checks, credits tax payments to the Treasury's account, etc.).
2. Assists in the sale, payment of interest, and redemption of U.S. Government securities (savings bonds, Treasury bills, etc.).
3. Helps collect social security and withholding taxes from employers.
4. Destroys worn out currency and keeps records of how much is destroyed.

Look up the meaning of the word "fiscal" in a dictionary:

(6)_____

_____

_____

Now look up the meaning of the word "agent":

(7)_____

_____

_____

Now write an explanation of what the Fed's role is as a fiscal agent:

(8) _____

_____

_____

_____

The third role of the Federal Reserve System probably is the one that affects you and your parents most directly. It is its role as a banker's bank. What do you think a banker's bank does? Who does it help?

(9) _____

_____

_____

_____

_____

Briefly list the three main functions of commercial banks. If you don't remember what they are, refer to your notes and activity sheets from Section II.

(10) 1. _____

2. _____

3. _____

How can the regional Federal Reserve Banks help the commercial banks perform these functions? Write down any ideas you have.

(11)

The 12 District Federal Reserve Banks are regional banker's banks. They are institutions that member commercial banks depend on for certain services. Nonmember banks (state banks that choose not to join) must work through a member bank to receive these services. Listed below are the most important services provided by regional "banker's banks".

1. <u>They help commercial banks meet their customers' demands for cash and at the same time provide safekeeping facilities for excess cash</u>. As their customers need more cash, commercial banks can decrease the part of their reserves kept at the Federal Reserve Bank and increase the amount of cash in their vaults. As more cash comes <u>in</u> to the banks, they can deposit it at the Reserve Bank.

2. The District Federal Reserve Banks help commercial banks transfer funds by providing for a national check collection and payment system and for nationwide wire transfer of funds. Each year, they sort over 10 billion checks written by commercial bank customers and return them to the banks on which they were written. They see that payment for many of these checks is made quickly by crediting and debiting the reserve accounts of member banks. Through the Federal Reserve Wire Transfer System, Reserve Banks permit member banks to transfer money for their customers from one part of the country to another in a matter of minutes. Again, they actually transfer the funds by crediting and debiting reserve accounts.

3. The Federal Reserve Banks also assist commercial banks in making loans to individuals and businesses. As discussed in Activity 2 of this Section, the Fed requires member banks to keep a certain amount of reserves. District Federal Reserve Banks, however, do lend money to member banks to cover the shortages in their reserve accounts that sometimes result from a temporary demand for funds. In this way, a bank does not have to call back loans or deny loans to qualified applicants because of temporary cash shortages.

To summarize, the Federal Reserve System regulates our supply of money as our central bank, provides services to the U.S. Treasury as a fiscal agent, and provides essential services to commercial banks as a banker's bank.

1. ...at are member bank "reserves"?

   a. Funds deposited by customers that cannot be withdrawn without advance notice.
   b. Only funds deposited with the Federal Reserve. A bank applies for a loan if it needs these funds to cover withdrawals.
   c. The currency banks keep in their vaults or funds they keep at the Federal Reserve Bank to cover withdrawals.
   d. Funds a bank sets aside to use for improving facilities and increasing services.

2. Which was <u>not</u> true of the bank panics in the early 1900s:

   a. Bank customers attempted to withdraw more currency than banks had on hand.
   b. Banks borrowed money from other banks.
   c. The Federal Reserve System lent money to banks in trouble.
   d. People lost confidence in the nation's banking system.

3. An "elastic" money supply refers to:

   a. Currency whose value changes from day to day.
   b. A currency supply that contracts and expands depending on the economy's needs.
   c. A money supply that comes in several forms and offers much flexibility.
   d. All of the above.

4. All nations' central banks:

   a. Have twelve reserve banks.
   b. Have a Board of Governors.
   c. Have an elastic currency.
   d. Are controlled by the government.

5. The Federal Reserve System:

   a. Determines United States monetary policy.
   b. Is a quasi-government agency.
   c. Is our central bank.
   d. Is made up of all banks in the United States.
   e. a, b, and c
   f. a and c only
   g. b and d only

6. A regional Reserve Bank does all of the following <u>except</u>:

   a. Distributes currency and coin to banks.
   b. Makes short-term loans to banks.
   c. Sets a district monetary policy.
   d. Serves as a regional clearing house for checks.

7. Why is a Federal Reserve Bank sometimes called a "banker's bank"?

   a. It makes loans to bankers as well as businesses.
   b. It provides services essential to banking operations.
   c. Only bankers benefit from the services it provides.
   d. Only bankers have a say as to what the Federal Reserve Bank can do.

8. Monetary policy:

   a. Is the influencing of the money supply in our economy.
   b. Is the supervision of loan approvals by banks.
   c. Is the regulation of currency distribution in the United States.
   d. Is determined by each large bank in the United States.

9. A national bank:

   a. Has offices in every state of the Union.
   b. Cannot join the Federal Reserve System.
   c. Is a government-operated bank.
   d. Must join the Federal Reserve System.
   e. Is a central bank.

10. How is it possible for bankers to lend out most of the money deposited with them when depositers can withdraw that money?

    a. No more than 55% of deposits are loaned out at one time.
    b. The Federal Reserve System automatically provides money to cover any withdrawals that exceed deposits.
    c. Experience has shown that deposits usually offset withdrawals.
    d. Banks always maintain reserves equal to the amount of money customers have in checking and savings accounts.

Section IV How the Clearinghouse Works

About This Section . . .

The functions of the Federal Reserve Banks are a combination of service and policy activities. One of their most important service activities is that of a check clearinghouse. The activities of Section IV help students to understand what happens to a check from the time it is written until it is paid as well as to develop certain check writing skills.

Generalization:

- The Federal Reserve System processes and records checkbook money as a service to the financial community. Efficient administration of checkbook money allows it to become a viable medium of exchange in a complex economic system.

Activity 1 - The Story of Checks

OUTCOME: Students will know the origins of checks and the "clearinghouse" and state how each has helped improve the transfer of funds. Students also will be able to write a check correctly.

Reading/Worksheet/Transparency *Time: 45 min.*

Materials Needed:
Booklet - "The Story of Checks" (see "Additional Materials")
Worksheet: "The Story of Checks"
Transparency #1 - "Route of a Check"

Activity Instructions:
This activity reviews money, banking, and the development of the clearinghouse function. The instructor should give each student the worksheet and the booklet, "The Story of Checks." In class or as homework, the students should complete the worksheet.

In a follow-up discussion, go over the worksheet using "The Story of Checks" to verify student responses and to give further explanations as class needs dictate. Special attention should be given the problems of check cancellation before the creation of the Federal Reserve System clearinghouse (p. 8 in the booklet) and the review of the check cancellation process (p. 11 in the booklet). To help illustrate the movement of the check described on page 11 of the booklet, the instructor should use Transparency #1.

Activity 2 - The Need for a Nationwide Check Collection System

OUTCOME: Students will *see* exactly how checks go through the clearinghouse system and the role played by the 12 regional Federal Reserve Banks in the rapid transfer of checkbook funds.

Reading/Application Lesson *Time: 90 min.*

Materials Needed:
Reading #1 - "How a Check is Processed"
Application Lesson: Clearinghouse

Activity Instructions:
To review and illustrate the process involved in check cancellation, the students may read "How a Check is Processed." If Reading #1 is not used, the instructor should review the three main functions of commercial banks. Inform students that the focus of this activity is the clearinghouse function. After the introduction, distribute to students "Application Lesson: Clearinghouse." Students should be instructed that the application lesson is a combination reading and worksheet. They may write on the paper and in many instances are asked to do so. It is hoped that by having students respond as they read they will become more involved in the activity.

The "Application Lesson: Clearinghouse" can be used as a class assignment or as homework.

Activity 3 - "Clearinghouse"

OUTCOME: Students correctly "walk a check" through the eight steps of the clearinghouse process carried out by the Federal Reserve Bank check processing centers.

Simulation/Transparency/Discussion *Time: 45 min.*

Materials Needed:
Materials listed below for each role
Transparency #2 - "Clearinghouse Function"

Activity Instructions:
In the Application Lesson (Activity 2), the rather unsavory Mr. A. Nonamus sold the Brooklyn Bridge to one of your students. The check processing procedures involved in this transaction will be simulated in this activity.

Seven students should be assigned to the roles listed below. Simulation materials can be made from construction paper or may even be drawn on the chalkboard by each participant. Each participant should wear a sign stating his or her role. A large sheet of brightly colored construction paper should be used as the check that is being processed.

Roles	*Materials Needed*
A. Nonamus	Checkbook
Bridge buyer	Checkbook and check
Clerk at New York National Bank	Mr. A. Nonamus' bank record sheet
Clerk at New York Federal Reserve Bank	New York National Bank's record sheet
Clerk at Minneapolis Federal Reserve Bank	Eighteenth National Bank of the Twin Cities' record sheet
Clerk at Eighteenth National Bank of the Twin Cities	Bridge buyer's bank record sheet
Mail Carrier	

Following the steps outlined below and referring frequently to Transparency #2, the student role-players should slowly walk through the check cancellation process. As each step progresses, the check should be carried to the correct location. Bank record sheets should be debited or credited for $5,000 at the appropriate steps.

Students not assigned a role in the simulation should carefully monitor the location of the check and the addition and subtraction of funds from various accounts at each step.

Step I - Bridge buyer buys the Brooklyn Bridge from A. Nonamus. Bridge buyer writes a check for $5,000 and gives it to Mr. A. Nonamus.

Step II - Mr. A. Nonamus runs to the New York National Bank and deposits the bridge buyer's check. Mr. A. Nonamus records the deposit in his checkbook.

Step III - The clerk at the New York National Bank records a deposit of $5,000 in Mr. A. Nonamus' account. The clerk then sends the check to the Federal Reserve Bank of New York.

Step IV - The clerk at the Federal Reserve Bank of New York takes the check and credits the account of the New York National Bank with $5,000. The clerk then sends the check to the Federal Reserve Bank of Minneapolis.

Step V - The clerk at the F.R.B. of Minneapolis takes the check and subtracts $5,000 from the account of the 18th National Bank of the Twin Cities. The clerk then sends the check to the 18th National Bank of the Twin Cities.

Step VI - The clerk at the 18th National Bank of the Twin Cities takes the check and subtracts $5,000 from the bridge buyer's account. The clerk then gives the cancelled check to the mail carrier.

Step VII - The mail carrier delivers the cancelled check to the bridge buyer.

Step VIII - The Federal Reserve Bank of Minneapolis pays the Federal Reserve Bank of New York $5,000 to cover the $5,000 added to their accounts. Thus, the Minneapolis bank loses $5,000 and the New York bank gains $5,000.

Follow-up Discussion:
Using the following questions, discuss the simulation. Some of the information will be new to the students.

1. How does the Federal Reserve System help speed up the sorting of checks? [Eliminates roundabout routing to avoid exchange charges; its high speed equipment electronically sorts checks using the magnetic ink character recognition system; collection centers operate 24 hours a day, 6 days a week.]
2. How does the Federal Reserve System accomplish the actual transfer of funds initiated by the writing of a check? [The Federal Reserve System uses the reserve accounts of member banks to transfer funds from one bank to another. It debits the reserve account for checks written by customers of a member bank, and it credits the reserve account for checks payable to customers of the member bank.]
3. What if a bank does not belong to the Federal Reserve System? [A nonmember bank works through a member bank to get its checks sorted and processed by the Federal Reserve System.]
4. Are *all* checks sorted at Federal Reserve Bank check processing centers? [No, local checks—checks written on a bank located in the same city as the bank of the payee—are not sorted at the Federal Reserve Bank check processing centers. Instead, local banks are required to meet at a local clearinghouse each day to exchange checks.]

WORKSHEET: "THE STORY OF CHECKS"

(1) How are checking accounts convenient?

(2) Explain why the bank messengers of England met at "Ye Olde Coffee Shoppe."

(3) Where and when were the first checks used in the United States?

(4) What three developments after the Revolutionary War helped to increase the popularity of checkbook money over currency?

a.

b.

c.

(5) Why did banks very often send a check to a "correspondent bank" first rather than sending it directly to the bank upon which the check was written?

(6) How did the Federal Reserve Act of 1913 eliminate the problems of "exchange charges" and roundabout routing of checks?

(7) List the seven steps a check goes through when it is processed by the Federal Reserve System. Assume that the check is written by a buyer in one district and given to a seller in another.

a.

b.

c.

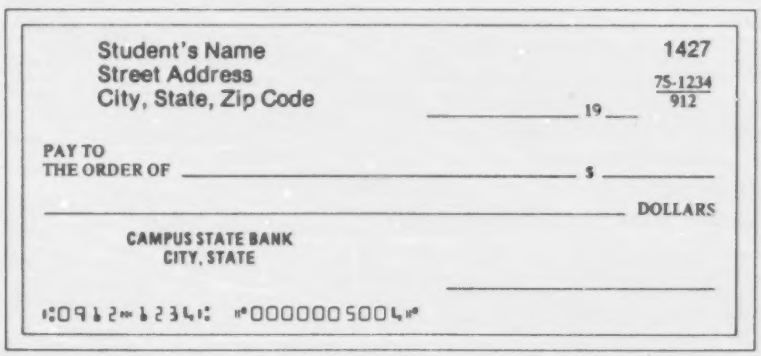
d.

e.

f.

g.

(8) Practice correctly writing a check by filling in the blank spaces on the sample check below. Write it to one of your classmates, use today's date, and write the check for $19.78.



(9) What is the purpose of the magnetic ink characters encoded along the bottom of the check as shown in the above example?

Route of a Check

Check is sent to art dealer in Sacramento

1. The art dealer deposits the check in his account at a Sacramento bank.
2. The Sacramento bank deposits the check in its account at the Federal Reserve Bank of San Francisco.
3. Federal Reserve Bank of San Francisco sends the check to the Federal Reserve Bank of New York for collection.
4. The FRB of New York forwards the check to the Albany bank which debits the amount from Mrs. Henderson's account.
5. The Albany bank authorizes the FRB of New York to deduct amount of check from its account.
6. FRB of New York pays FRB San Francisco from its Inter-District Settlement Fund.
7. FRB of San Francisco credits Sacramento bank account and the Sacramento bank credits the art dealer's account.

HOW A CHECK IS PROCESSED*

Americans today are writing over 30 billion checks annually. A check is an instruction, given by a depositor to his or her bank, to transfer funds to someone else. It may pay for goods and services bought locally or in other parts of the country. A person receiving a check wants it presented for payment as quickly as possible, because any delay will postpone the time when money represented by the check can be used.

When a check is written in or near the community of the bank on which it is drawn, presentation for payment is direct—local banks just exchange checks among themselves. It's estimated, however, that more than half of all checks leave the local community. Banks receiving checks drawn on distant banks find it costly and inconvenient to return such checks directly for payment. Instead, banks that are members of the Federal Reserve use check collection services at district Federal Reserve Banks, where checks for many banks are cleared at the same time. Some are presented by member banks, some are presented by the Treasury of the United States or other government agencies, and some are received from other Federal Reserve Banks. Banks that are not members of the Federal Reserve open correspondent accounts with member banks in part to take advantage of the Fed's check processing services.

Check Departments at Reserve Banks use modern electronic equipment to sort checks for payment as quickly as possible. They send checks directly to banks located in their own Reserve district and send checks drawn on banks in other districts directly to the Federal Reserve Bank serving those banks. The receiving Reserve Bank, in turn, forwards checks to the banks in its district on which they are drawn. Reserve Banks give deposit credit for the checks received from member banks and must obtain payment from

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*Adapted from Your Money and the Federal Reserve System, Federal Reserve Bank of Minneapolis, 1976.

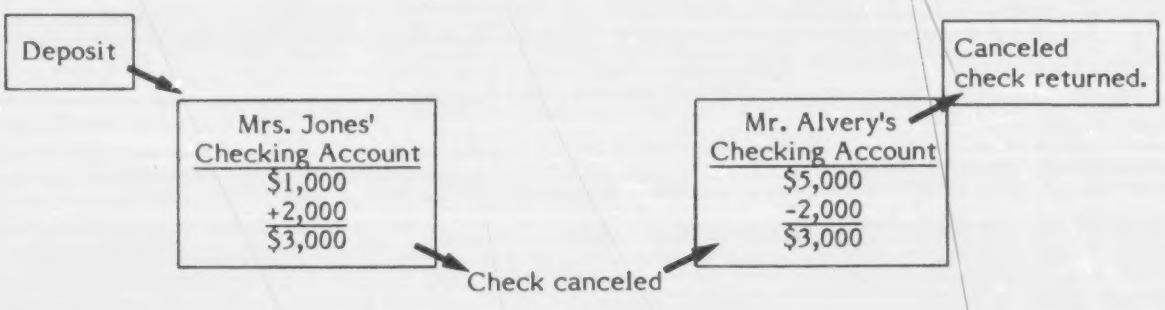
banks on which checks are drawn. For payment, the Reserve Bank may charge the reserve account of the paying bank directly. A nonmember bank, which does not have a reserve account at the Fed, may be charged indirectly. This is done by charging the reserve account of the member bank that has the nonmember bank's correspondent account. The member bank, in turn, charges the nonmember bank.

APPLICATION LESSON: CLEARINGHOUSE

The transfer of money from one checking account to another through the help of the Federal Reserve check processing services is difficult to explain in words alone. This application lesson will put the "Clearinghouse" service into diagrams.

Example #1

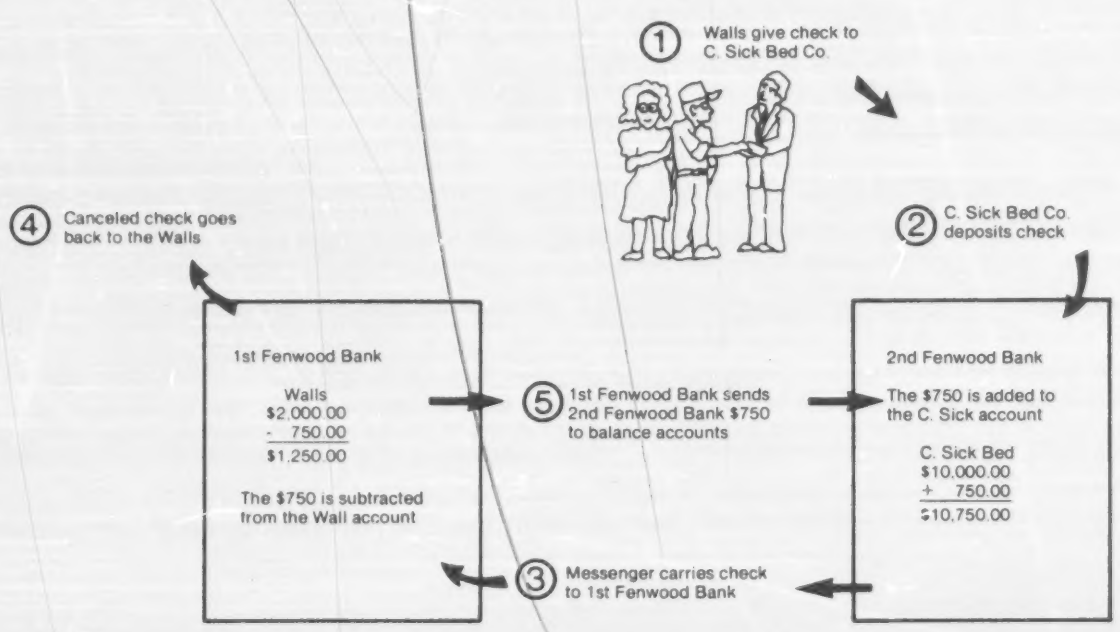
Mrs. Jones lives in Fenwood. Every year she holds a huge garage sale. This year she sold the garage to Mr. Alvery. Mr. Alvery, to pay for the garage, wrote Mrs. Jones a check for $2,000. Mrs. Jones deposited the check in her checking account. Since Mr. Alvery and Mrs. Jones have checking accounts at the same bank, a computer (or clerk) subtracted $2,000 from Mr. Alvery's account and added $2,000 to Mrs. Jones' account. The process is carried out at one bank.



Example #2

Ima and Ura Wall yesterday purchased a $750 waterbed from the C. Sick Bed Company. Ima wrote a check for the entire amount and gave it to the company's salesman who deposited the check in the company's bank, The Second Fenwood Bank. Ima and Ura's bank is the First Fenwood Bank. Since both banks are in the same town, they need only exchange checks every day.

Note: No money actually changes hands. Money is added or subtracted from people's accounts merely by entries in a bank ledger.

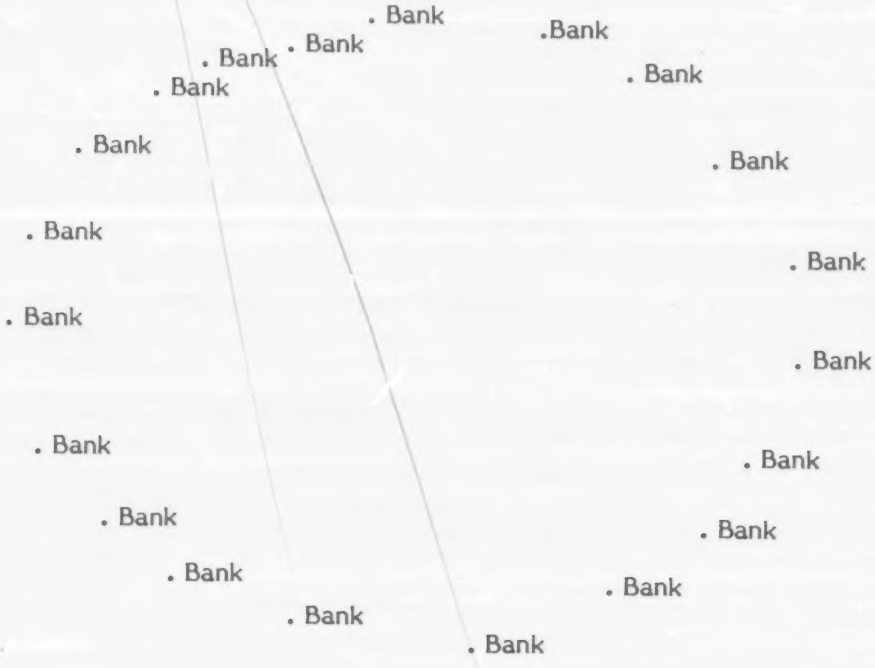

1 Walls give check to C. Sick Bed Co.
2 C. Sick Bed Co. deposits check
3 Messenger carries check to 1st Fenwood Bank
4 Canceled check goes back to the Walls
5 1st Fenwood Bank sends 2nd Fenwood Bank $750 to balance accounts
1st Fenwood Bank
Walls
$2,000.00
- 750.00
$1,250.00
The $750 is subtracted from the Wall account
2nd Fenwood Bank
The $750 is added to the C. Sick account
C. Sick Bed
$10,000.00
+ 750.00
$10,750.00

Federal Reserve System

Not all check canceling procedures are as simple as the ones described above. If you took a trip to New York and wrote a check to a man in a pink-checked suit for $5,000.00 to purchase the Brooklyn Bridge, that man would need a way to deposit your check into his account, send the check to your bank so that your account could be reduced by $5,000, and then have $5,000 added to his account. The man would want this process to occur rapidly so he could get out of town before you tried to collect tolls from cars crossing "your" bridge!

Can you imagine the confusion if every day thousands of banks had to send thousands of checks to thousands of other banks? To get an idea of how confusing this would be, assume that the 20 dots below are 20 banks. Each bank has to send at least one check to each of the other 20 banks. Draw lines from each bank to all the other banks to represent the movement of checks from one bank to another.

CLEARINGHOUSE



Since there are 14,000 banks in the United States, you can see what a confusing process it would be to send checks back and forth to each bank separately.

The location of the 12 Federal Reserve Banks throughout the country simplifies the sorting of the over 30 billion checks written annually. You probably remember some of the locations from a transparency you looked at earlier.

CLEARINGHOUSE

On the map below, locate the cities where you will find the 12 Federal Reserve Banks.

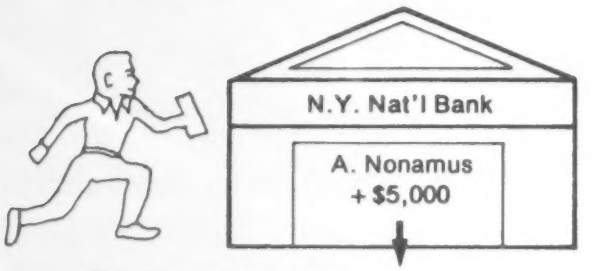
Boston, Massachusetts
New York, New York
Philadelphia, Pennsylvania
Cleveland, Ohio
Richmond, Virginia
Atlanta, Georgia
Chicago, Illinois
St. Louis, Missouri
Minneapolis, Minnesota
Kansas City, Missouri
Dallas, Texas
San Francisco, California

The sorting of checks the 12 Banks do is a huge task when you consider that over 30 billion checks are written annually. Without the clearinghouse function performed by the 12 Feds it would take each bank weeks to process checks and cancel them. This delay would have serious consequences for our economic system, a system that depends on the rapid transfer of funds from person to person.

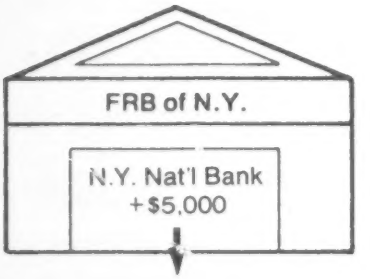
Clearinghouse Function

Let's take another look at what happened to that check you wrote to A. Nonamus in the amount of $5,000 for the purchase of the Brooklyn Bridge. We will assume that your check is from the Eighteenth National Bank of the Twin Cities.

① Mr. A. Nonamus quickly runs to his bank and deposits your check into his checking account.



② The New York National Bank deposits the check in the Federal Reserve Bank of New York.

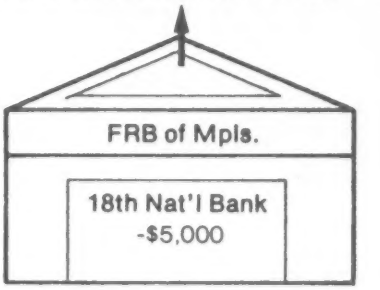


③ The New York National Bank has an account at the New York Fed. $5,000 is added to the New York Bank account.

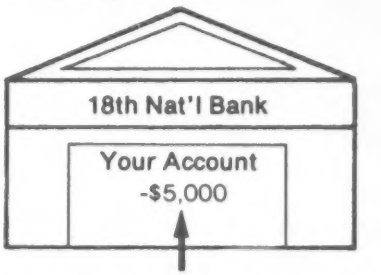
④

The Federal Reserve Bank of New York sends the check to the Federal Reserve Bank of Minneapolis.

⑤ The Minneapolis Federal Reserve Bank subtracts $5,000 from the account it holds for your bank.



⑥ Your check is forwarded by the Minneapolis Federal Reserve Bank to the 18th National Bank of the Twin Cities.



⑦ The $5,000 is subtracted from your account and the canceled check is returned to you.

1. Exchange charges:

   a. Decreased the time it took a check to be paid.
   b. Made a check worth less to the person receiving it.
   c. Are still used by member banks of the Federal Reserve System.
   d. All of the above.

2. All of the following are true of a check except:

   a. It is used more than currency or coin.
   b. It is a written order to transfer funds.
   c. It can be used in exchange for goods and services.
   d. It is used to settle accounts only in one's local area.

3. At a regional Reserve Bank Check Department, all of the following are true except:

   a. Most checks are electronically sorted to banks for payment.
   b. Only checks written on banks located within its District are received.
   c. Often check balances are subtracted from or added to commercial bank reserve accounts with the Federal Reserve Bank.
   d. Local checks are not usually sorted at Reserve Bank Check Departments.

4. The most important reason for having a regional check clearinghouse is:

   a. Fewer people and machines are required to sort checks.
   b. Check processing is more orderly and better records can be kept.
   c. If mistakes are made bankers know where to go to get them corrected.
   d. It shortens the time required for a check to be paid.

5. A check written on New York City National Bank is deposited by a Minneapolis bank at the Federal Reserve Bank of Minneapolis. What happens to it?

   a. The check is returned to New York City National Bank which in turn sends it to the Federal Reserve Bank of New York.
   b. Federal Reserve Bank of Minneapolis sends check to New York City National Bank.
   c. The Federal Reserve Bank of Minneapolis returns the check to the Minneapolis bank.
   d. The check is sent to the New York Federal Reserve Bank which in turn sends it to New York City National Bank.

Section V How Banks Create Money

About This Section . . .

To understand how monetary policy works it is necessary to understand how commercial banks create money. Commercial banks lend out their excess reserves. These loaned funds are eventually redeposited and are then loaned out again. As a result, a single dollar deposited in a commercial bank can, in effect, become several dollars in the economy. This process is explained with concrete examples in the simulation activity in this section. The conditions necessary for money creation and the reserve requirements that regulate money creation are also discussed in this section.

Generalizations:

- Commercial banks are unique among financial institutions because they can create checkbook money by lending deposits in excess of required bank reserves to businesses and individuals.
- The degree to which banks can expand the money supply is regulated by the Federal Reserve System, the institution responsible for controlling the size of the money supply.

Activity 1 - How Banks Create Money (I)

OUTCOME: Students can demonstrate how successive deposits and loans by commercial banks cause the money supply to expand, and what happens to the money supply when the reserve requirement is raised or lowered.

Simulation/Transparency/Discussion *Time: 90 min.*

Materials Needed:
- *Scissors*
- *Name tags*
- *Chalkboard*
- *Ruler*
- *Construction paper*
- *Transparency #1* - "Creation of Money"

Activity Instructions:
In this role-play simulation, the teacher must select students to play the following roles:

1. Keeper of the money supply
2. Bankers A-J (10 students)
3. Nine borrowers
4. Mathematician

Name tags are useful.

STEP 1. Provide each participant in the simulation with the necessary materials:

Keeper of the Money Supply should be stationed at the chalkboard with chalk and a gigantic $100 bill (one meter long, divided into centimeters; 50 centimeters wide). Each centimeter represents one dollar.

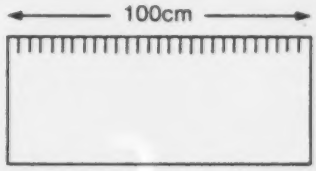
Bankers A-J must be stationed so that a segment of the chalkboard or a piece of newsprint is behind them. A ledger should be written on the board/newsprint for each bank. Use the following format:

BANK A		BANK B	
Deposit	$ ____	Deposit	$ ____
Reserve Requirement	$ ____	Reserve Requirement	$ ____
Amount Available for Loans	$ ____	Amount Available for Loans	$ ____

Borrowers will be given the task of obtaining loans from each bank after the initial deposits have been made. Note: the amount of each loan should be equal to the bank's deposit less the reserves it is required to hold.

Mathematician is given the responsibility of calculating the reserve amounts for each bank and the total funds available for loans. This person should be stationed close to the keeper of the money supply and should have scissors for the purpose of clipping off the legal reserve amounts for each bank.

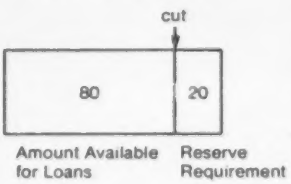
STEP 2. Direct the keeper of the money to trace the gigantic $100 bill on the chalkboard labeling it "Money Supply." (Note: Leave room for additional money supply entries next to the bill.)



Upon completion of the above task, direct the keeper of the money supply to deposit the $100 into Bank A.

STEP 3. Direct Bank A to record the $100 deposit on the chalkboard or newsprint. At this point the mathemetician should calculate the dollar amount of a 20% reserve requirement. Record this amount under the appropriate category. The mathematician must now cut the reserve requirement amount off the $100 bill (20 centimeters). The reserve section stays with the bank. The remaining $80 should be recorded under the category, "Amount Available for Loans."

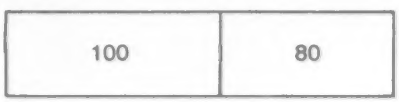
(Appropriate Step 3 entries)
Mathematician cuts off the
20% reserve requirement



BANK A

Deposit	$100
Reserve Requirement	$ 20
Amount Available for Loans	$ 80

STEP 4. Borrower #1 moves to Bank A for a loan equal to the total amount available for loans (Teacher may wish to point out that in real life borrower #1 would actually be many people or institutions.) Bank A then gives Borrower #1 the $80 bill. At this time the borrower goes to the Keeper of the Money Supply and allows him/her to trace the $80 bill directly adjacent to the beginning sum (see diagram).



The added $80 represents the increase in the total money supply created by the loan.

STEP 5. Borrower #1 then takes his/her $80 and deposits it in Bank B. (Teacher may wish to point out that in real life Borrower #1 would invest or spend this $80 and someone else would be redepositing it in Bank B.) Bank B records the transaction as "Deposit $80." The mathematician now figures the new reserve requirement at 20% of $80 and also determines the amount available for lending held by Bank B. The mathematician must now cut the reserve requirement amount off the $80 bill (16 centimeters). The reserve section stays with Bank B. The remaining $64 should be given to the bank for recording under the category "Amount Available for Loans." Bank B's record will look as follows:

BANK B

Deposit	$80
Reserve Requirement	$16
Amount Available for Loans	$64

STEP 6. (This is a repeat of Step 4.) Borrower #2 moves to Bank B for a loan equal to the total amount available for loans. The Keeper of the Money Supply traces the increase in the money supply on the blackboard or newsprint. Steps 4 and 5 are repeated for each expansion cycle of the money supply. The instructor may proceed through as many cycles as needed for student understanding.

Follow-up Discussion:
Show students Transparency #1 which illustrates the money creation process they have just simulated.

Now ask them the following questions:

- Would the "Creation of Money" chart look different if the Federal Reserve System raised the reserve requirement from 20% to 25%? How would it be different? [Less money would be created with each successive deposit and loan; the total money supply expansion would be only $400.]
- What if the Federal Reserve System lowers the reserve requirement from 20% to 15%? [More money would be created with each successive deposit and loan; the total money supply expansion would be $667.]
- If the Federal Reserve System wanted to expand the money supply—make more money available—what could it do? [Lower the reserve requirement.]
- If the Federal Reserve System wanted to contract the money supply—make money less available—what could it do? [Raise the reserve requirement.]

Activity 2 - How Banks Create Money (II)

OUTCOME: Students can graph the money supply expansion simulated in Activity 1 and state how the size of the money supply can affect prices, employment, and business activity.

Transparency/Graphing/Discussion *Time: 30 min.*

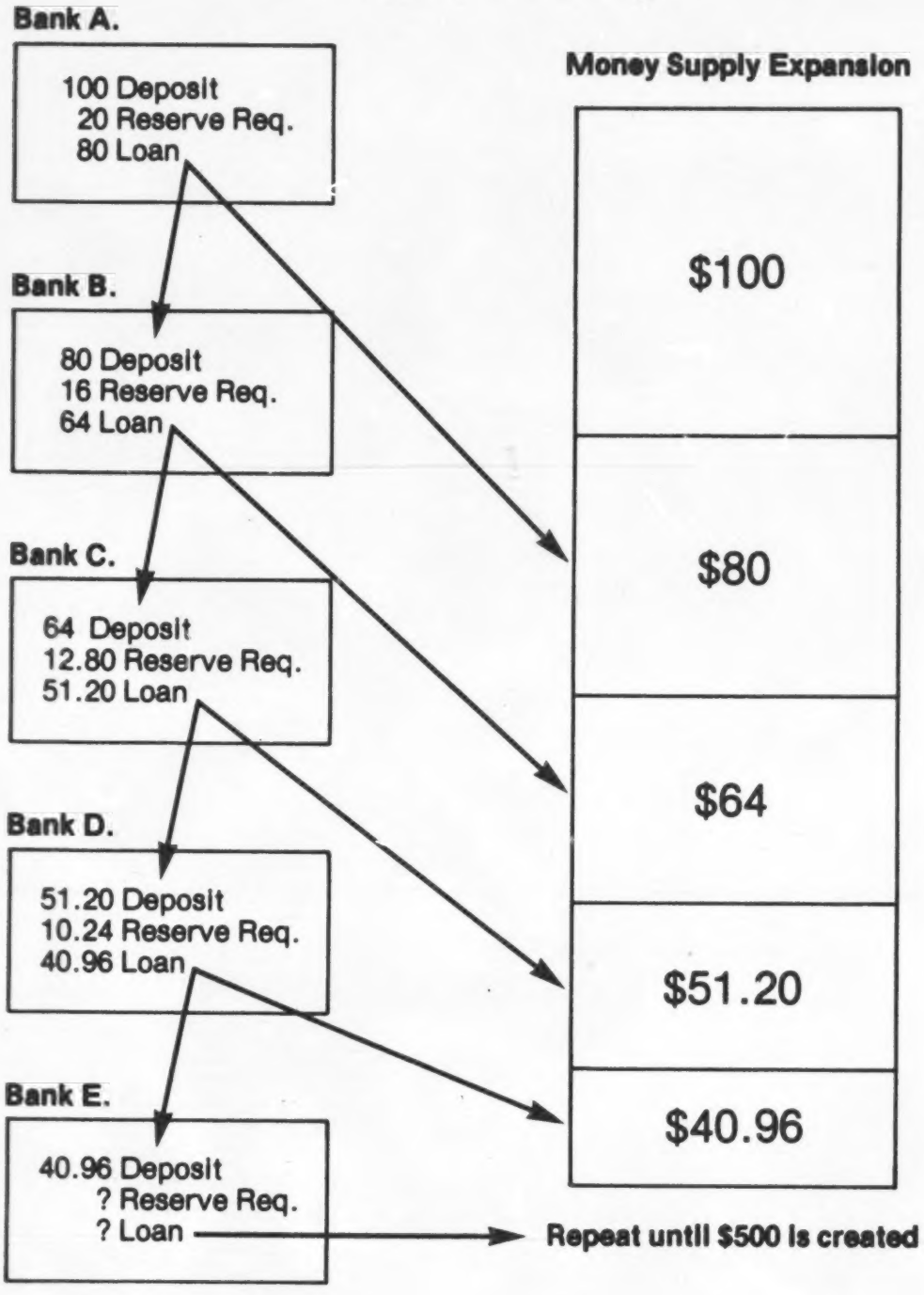
Materials Needed:
Transparency #2 - "Expansion of the Money Supply at 20% Reserve Requirement"
Graphing Exercise - "How Banks Create Money"

Activity Instructions:
This activity provides a visual representation of the process of money creation. The instructor should show the class Transparency #2. The students may recognize the data as being that obtained from the simulation, "How Banks Create Money (1)." When students are familiar with the data, the instructor should give each student the graphing exercise, "How Banks Create Money." Using the data from the chart on Transparency #2, students should graph the expansion of the money supply through the 10 stages.

During the follow-up discussion, the instructor should ask:

- What factors must be present in a community (economy) in order for money to be created? [People saving and investing money; people borrowing to buy homes, cars, etc; banks willing and able to make loans; businesses expanding and increasing production; favorable economic outlook.]
- What can be the impact on a community (economy) if the money supply is too small? [Less than full utilization of productive resources, decrease in production of goods and services (recession), higher unemployment rate, decrease in investments and savings, higher interest rates, tighter credit, fewer loans made to businesses and individuals.]
- What can be the impact on a community (economy) if the money supply is too large? [Rising prices, decrease in purchasing power of the dollar, lower interest rates, easy credit, more loans made to businesses and individuals, speculation.]
- What can be the impact on you if the money supply is too small? [Unable to buy desired goods and services, lose job or unable to find employment, unable to get a loan or other credit, reduction in government services.]
- What can be the impact on you if the money supply is too large? [Cost of living increases, possible credit troubles due to easy credit, decreased value of savings, increased value of real estate, speculative losses.]
- What would happen to the money creation process if the reserve requirement was increased/decreased? [Reserve requirement increased—banks less able to make loans; reserve requirement decreased—banks more able to make loans.]

Creation of Money



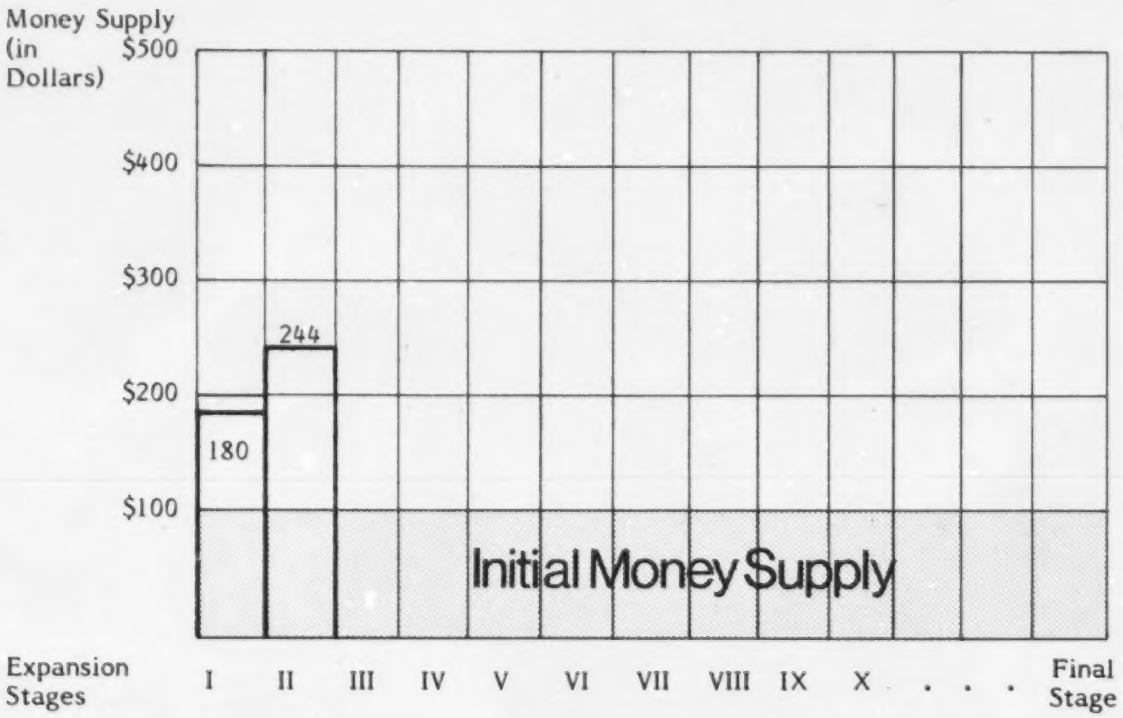
Expansion of the Money Supply at 20% Reserve Requirement

	Amount Added to Money Supply if All Available Funds are Loaned	Required Reserves at 20%	Amount Available for Loans	Total Money Supply
Initial Money Supply	$100.00	$20.00	$80.00	$100.00
Stage I	80.00	16.00	64.00	$180.00
Stage II	64.00	12.80	51.20	244.00
Stage III	51.20	10.24	40.96	295.20
Stage IV	40.96	8.19	32.77	336.16
Stage V	32.77	6.55	26.22	368.93
Stage VI	26.22	5.24	20.98	395.15
Stage VII	20.98	4.20	16.78	416.13
Stage VIII	16.78	3.36	13.42	432.91
Stage IX	13.42	2.68	10.74	446.33
Stage X	10.74	2.15	8.59	457.07
	.	.	.	.
	.	.	.	.
	.	.	.	.
Final Stage	$ 00.00	$00.00	$00.00	$500.00

GRAPHING EXERCISE: HOW BANKS CREATE MONEY

Using the data available from the chart, "Expansion of the Money Supply at 20% Reserve Requirement," graph the total money supply at each stage of the monetary expansion process. The initial money supply and stages 1 and 2 of the expansion process have already been graphed.

Growth of the Money Supply
on Basis of $100 New Deposits and
Reserve Requirements of 20 Percent



Expansion Stages

1. Which of the following is not true of the money creation process?

   a. The total amount of money created is regulated by the Federal Reserve System.
   b. It takes place in all financial institutions.
   c. It creates new demand deposits.
   d. It depends on businesses and individuals wanting loans.

2. Commercial banks can lend out money in an amount equal to their:

   a. Required reserves.
   b. Deposits.
   c. Deposits minus required reserves.
   d. Required reserves minus deposits.

3. If a bank can lend out more money today than it could yesterday:

   a. Reserve requirements were raised or deposits increased.
   b. Reserve requirements were raised or deposits decreased.
   c. Reserve requirements were lowered or deposits increased.
   d. Reserve requirements were lowered or deposits decreased.

4. Which of the following can influence the money creation process?

   a. Interest rates borrowers must pay on a loan
   b. Reserve requirement set by the Federal Reserve System
   c. Total supply of money in the economy
   d. All of the above.

5. If a bank has $2 million in deposits and the Federal Reserve has said that banks must keep 25 percent of deposits in reserve, how much can the bank lend?

   a. $2 million
   b. $8 million
   c. $500,000
   d. $1,500,000

Section VI How Monetary and Fiscal Policies Work

About This Section . . .

The Federal Reserve System affects the money supply of the nation by means of monetary policy. Through three tools of monetary policy—open market operations, the discount rate, and reserve requirements—the Federal Reserve influences how much money and credit is available to individuals and businesses. Used properly, these tools help the American economic system reach its objectives of steady growth, high levels of employment, and stable prices. This section explains the tools of monetary and fiscal policies, using supply and demand graphs, simulations, readings, and transparencies. It also explains how efforts to stimulate the economy and reduce unemployment can fail when people anticipate the inflation caused by such policies.

Generalizations:

- The Federal Reserve System attempts to promote full employment, economic growth, and price stability by influencing the money supply and the availability of credit to affect total demand in the economy.
- The Federal Reserve System's principal responsibility is to regulate the nation's money supply through (1) reserve requirements, (2) the discount rate, and (3) open market operations.
- Monetary policy (regulating the size of the money supply) cannot solve all economic problems. The decisions of individuals, businesses, and bodies of government also play important roles in influencing our economic system.
- "Rational Expectations"—a new view—states that people will act logically and rationally to maintain the purchasing power of their incomes when they anticipate inflation.

Activity 1 - Supply and Demand for Credit

OUTCOME (Part 1): Students can define interest as the "price" a borrower must pay for the use of money.

OUTCOME (Part 2): Students can graph the interest rate on borrowed funds, given the supply and demand for credit.

OUTCOME (Part 3): Students can demonstrate, using supply and demand graphs, how interest rates change when supply or demand conditions change.

Worksheet/Reading/Application Lesson *Time: 60 min.*

Materials Needed:

Part 1 - Can of pop or candy bar, dollar bill
Worksheet: Why Banks Loan Money

Part 2 - Reading #1 - "Supply and Demand for Credit"

Part 3 - Application Lesson: Supply and Demand for Credit

Activity Instructions:

Part 1: Show the class a can of pop or a candy bar. Ask them to tell you its price. Next show the class a dollar bill. Ask them to tell you its price. If no student responds with "interest rate," ask students why banks don't loan money free. [Any time there is not enough of a commodity to satisfy everyone's wants, it is a scarce item with a price rather than a free item.] Distribute the "Worksheet: Why Banks Loan Money," and have students work through it together using their "Financial Institution Survey Form" (Section II, Activities 2 and 3) as a reference source.

Part 2: Inform students that the price for the use of money (interest rate) is determined (as for any good or service) by supply and demand. Distribute Reading #1 and go through the graph and definitions as a class. Depending on student experience with supply and demand graphs, the teacher may want to spend more time showing how graphs are drawn by plotting the quantities demanded and supplied at each possible price.

Part 3: Distribute "Application Lesson: Supply and Demand for Credit" and explain the format to students. This can be assigned as an in-class activity or as homework. If it is assigned as homework, the instructor should lead the students through the lesson during the following class period. At this time students can be informed that in the real world there are *many* markets for money and *many* influences, besides interest rates, that can affect the supply and demand for credit.

Activity 2 - Effects of Monetary and Fiscal Policies

OUTCOME: Students demonstrate the effect specific monetary and fiscal policy measures have on the amount of money individuals and the community have to spend.

Simulation *Time: 45 min.*

Materials Needed:

Play Money
Certificate Notes
$100, $500, and $1,000 Loan Contracts

Activity Instructions:

Distribute money to ten students in varying amounts and explain that it represents their monthly incomes. In the United States, the average family of four receives approximately $1,335.00 per month before taxes; but the students' "incomes" could reasonably range from a few hundred dollars to several thousand dollars per month. Be sure to have poverty-striken people as well as wealthy people in the class.

Upon completion of the money distribution, inform the students that you wish to keep track of the total money in their possession. Add up what they have and write the total on the chalkboard.

Inform the students that you are now going to create economic difficulties for your classroom community. These difficulties will dictate policy measures which will change the amount of money in circulation.

Situation #1. The classroom community is experiencing inflation (prices are generally rising). The purchasing power of the dollar is falling. (You now can buy fewer goods and services with your money.)

Policy Measure #1. Sell bonds to interested community members for face amounts of $100, $500, and $1,000. Use a certificate note stating "I.O.U. _____ amount plus 10% interest" for this purpose. Calculate and record the money in the community. (Note: Inflation can be caused by excess demand. A reduction of the money in the hands of the consumer will reduce excess demand.)

Situation #2. The classroom community is experiencing high unemployment. Many people who wish to work cannot find work.

Policy Measure #2. Announce a lower tax rate which is retroactive to the past year. For simplicity's sake, give a $100 rebate to each student. Calculate and record the money in the community. (Note: Unemployment is usually caused by low demand for goods and services. An increase in the amount of money in the hands of the consumer will help stimulate business.)

Situation #3. The classroom community is experiencing another rapid price rise.

Policy Measure #3. Sell more bonds and raise taxes to 10% of income. Collect the 10% tax from each student. Calculate and record the money in the community. (Note: Tax rate manipulation is a fiscal policy measure controlled by Congress and the executive branch.)

Situation #4. The classroom community is experiencing another bout of unemployment. This condition has been described as a depression because prices are also falling.

Policy Measure #4. Buy back some of the bonds sold previously. Collect the bonds and pay the owners face value plus interest. Calculate the amount of money in the community. In addition to this policy, make your loans more attractive by charging a 3% interest rate. If students elect to take advantage of this loan opportunity, have them sign a contract in the amounts of $100, $500, or $1,000. Give them the money. Calculate the amount of money in the community.

Activity 3 - Monetary Policy . . . Regulating the Money Supply

OUTCOME: Students can list the three monetary policy tools and state how each is used to increase or decrease commercial bank reserves.

Reading/Transparencies *Time: 60 min.*

Materials Needed:
- *Reading #2* - "Monetary Policy . . . Regulating the Money Supply"
- *Transparency #1* - "Reserve Requirements"
- *Transparency #2* - "Discount Rate"
- *Transparency #3* - "Open Market Operations"

Activity Instructions:
Review the concept that there is a supply and a demand for credit. Emphasize again that the most important function of the Federal Reserve System is the regulation of the nation's money supply. Have students read Reading #2. It summarizes the basic tools the Federal Reserve System uses: (1) reserve requirements, (2) the discount rate (loans to member banks), and (3) open market operations. It is suggested that the instructor have the class read each of the three sections of the reading separately. After each section has been read, the instructor, using an overhead projector or the chalkboard, should diagram how each tool or policy decision affects the supply of credit. Transparencies #1, #2, and #3 can be used to illustrate the discussion.

Activity 4 - Banking and The Economy

OUTCOME: Students can identify specific monetary and fiscal policy measures used to fight inflation or stop a recession.

Filmstrip/Transparencies/Discussion *Time: 60 min.*

Materials Needed:
- *Filmstrip - The Role of the Commercial Banking System* (Part 2 - "Banking and the Economy") (See "Additional Materials")
- *Cassette filmstrip projector*
- *Transparency #4* - "Monetary Policy"
- *Transparency #5* - "Goals of Monetary Policy"
- *Transparency #6* - "Monetary and Fiscal Policy"

Activity Instructions:
Before viewing the filmstrip the instructor should lead a brief discussion using Transparencies #4 and #5. Define the terms "inflation" [a general rise in prices] and "recession" [a reduction in business activity] and discuss why it is important for the government and the Federal Reserve System to take steps to stop or control them. Discuss how poeple are hurt by inflation [purchasing power decreases, the value of savings diminishes, desired purchases must be eliminated or postponed]; by a recession [shortages of goods and services, unemployment, diminished value of investments].

The following study questions for the filmstrip, "Banking and the Economy" should then be written on the chalkboard:

- How does money circulate in our economy? [Refer to Section II, Activity 5 (Transparency #4) - "Model of the

American Economic System."]

- What tools can the Federal Reserve use to contract or expand the money supply? [changing the reserve requirements, changing the discount rate, and buying and selling government securities]
- If the Federal Reserve wished to fight inflation, what policies could it follow? [raise reserve requirements, raise discount rate, sell government securities]
- What factors that influence our economic system cannot be controlled by the Federal Reserve System? [fiscal policy, individual decisions, problems particular to a geographical area or a specific industry]

After viewing the filmstrip, the class should discuss the above questions. Answers should be placed in the students' notebooks.

Using Transparency #6, students can now apply the monetary tools discussed, as well as fiscal tools (taxing, spending), to the real-life problems of inflation and recession. Review the definitions of "inflation" and "recession" and then complete the chart using a semi-discussion/lecture format. A systematic explanation of what happens to the money supply when each policy tool is implemented will show students how the action can help "fight inflation" or "stop a recession." Explanations, illustrations, and examples should be used whenever necessary to clarify a concept.

Activity 5 - Goals of Federal Reserve Monetary Policy

OUTCOME: Students can show using a graph how consumer demand for goods and services and price levels can change when the Federal Reserve Open Market Committee takes action to increase or decrease commercial bank reserves.

Reading/Application Lesson *Time: 90 min.*

Materials Needed:
Reading #3 - "The Federal Open Market Committee"
Application Lesson: FOMC and Monetary Policy

Activity Instructions:
The instructor should have the students read and discuss Reading #3. This reading serves to tie together three previously developed concepts: (1) how banks create money, (2) monetary policy tools, and (3) the organization of the Federal Reserve Open Market Committee.

Review with students how the monetary policy decisions of the Federal Reserve Open Market Committee can increase or decrease commercial bank reserves. This, in turn, influences the volume of loans and, thus, money supply.

Distribute "Application Lesson: FOMC and Monetary Policy" and read and complete as a class so all students can benefit from the knowledge of others. The instructor should discuss and clarify concepts as class needs dictate.

Teacher's Note:
The Application Lesson may sacrifice some accuracy and complexity in order that the effects of monetary policy upon inflation or recession can be visualized by the majority of students at the mid-secondary level.

Activity 6 - How Prices Affect Income

OUTCOME: Students recognize rational and logical actions they may take as consumers and "wage earners" when faced with increases in prices.

Worksheet/Discussion *Time: 30 min.*

Materials Needed:
Worksheet: What Would You Do?

Activity Instructions:
Refer to the supplemental reading on "Rational Expectations" in the Instructor's Guide for background information to teach Activity 6 and Activity 7.

Distribute the "Worksheet: What Would You Do?" to students. Have them read each situation and decide, individually, what they would do if they were in that situation. Have the class share their responses and explain the reasons for their choices.

Using the following questions, discuss each situation:

1. What is the "cost" of each alternative? What is being given up? [Point out that the "cost" may be greater or lesser depending on how the individual values the item being sacrificed—school lunch, free time, savings.]
2. What are the possible costs of choosing alternative e, asking for a raise? [Antagonizing an employer or parents, being laughed at, being refused, losing income if fired or forced to find a new job.]
3. What are the possible benefits of alternative e? [You can maintain your standard of living with no additional sacrifice; your purchasing power has not been reduced despite the increase in prices. You are looking out for your own best interests and trying to protect your income against inflation. It is a *logical* and *rational* thing to do.]

Activity 6 - How Prices Affect Income
(Continued)

4. What would you do if you *heard* from a reliable source that the price of a school lunch was going up or that the price of other items you purchased would go up? [Answers may vary as students may or may not see the importance of planning ahead to maintain the purchasing power of their income. Consumers and wage earners do, in fact, take action to increase their income when they *anticipate* price rises.]

Activity 7 - Why Expansionary Policies Don't Always Work

OUTCOME: Students will be able to explain the rational expectations view that economic units will act to protect their own best interests and will thus oftentimes frustrate traditional stabilization policies.

Reading/Discussion *Time: 45 min.*

Material Needed:
Reading #5 - "Why Expansionary Policies Don't Always Work"

Activity Instructions:
Distribute Reading #5. Have students read through the discussion explaining how people's expectations about inflation cause traditional stimulative policies to fail. Study the two graphs pointing out how the *initial* increase in the quantity of goods and services supplied is negated by the workers' demands for higher wages.

Use the following questions to develop the five major points in the RE approach as listed in supplemental instructor reading, "Rational Expectations."

1. Do people (or economic units) care about inflation and its effects on the purchasing power of their money? [Yes.] What evidence is there to support this idea? [Demands for higher wages, investing to try to beat inflation, etc.] In order to overcome the effects of inflation and make the correct decisions about what to do about it, what must people do? [Form expectations about inflation and incorporate the expectations into their decisions.]
2. How likely are people to be wrong in their expectations of inflation the first time the government adopts an expansionist policy? [Answers may vary. People are likely to be wrong if their sources of information are wrong and they have had no personal experience with the new government policy; otherwise they are likely to be right.] How likely are people to be wrong in their expectations of inflation the second time the government adopts such a policy? [Not very likely.] The third time? [Very unlikely.]
3. What information is available to help economic units form rational expectations about inflation? [Research by labor unions, news reports on consumer price indexes and other economic indicators, past experiences, etc.]
4. Can government policy influence the rate of inflation? [Yes. As the graphs in Reading #5 demonstrate, expansionary government policies can increase the rate of inflation. Other policies—such as raising taxes, reducing government spending, or restricting the money supply—could decrease the rate of inflation.]
5. Can monetary policy alone control inflation? [No. Fiscal policy—taxing and government spending—is also necessary to control inflation.] Can expansionist policy alone control inflation? [No. In fact, expansionist policies are designed to raise prices.]
6. In forming expectations about inflation, what will rational people or economic units do? [They'll try to anticipate what government policy is going to be.]
7. Once people anticipate what government policy is going to be, what will they do? [They'll take action to protect themselves against inflation, e.g., strike for higher wages.] If people correctly anticipate what government policy is going to be and take protective measures, what effect will the government policies have on the level of output and employment in the economy? [Little or none. Refer to Graph #2.]

WORKSHEET: WHY BANKS LOAN MONEY

Name _____

Most of the time we think of money in terms of what it will buy. But money can also be thought of as a commodity that has its own price. Banks and others that have money to lend expect to be paid for its use. For proof that money has a price like any other commodity, see if you can answer the following questions:

1. Why do people put money in savings accounts? _____

   _____

2. Why do banks loan money? _____

   _____

Your answer to the first question probably included one or both of the following: People put money in savings accounts to keep it safe and to make more money by earning interest.

The "Financial Institution Survey Form" you completed in Section II will help you answer the second question:

(a) Savings earn interest at a rate of approximately _____%.

(b) Borrowers pay interest on loans at approximately _____%.

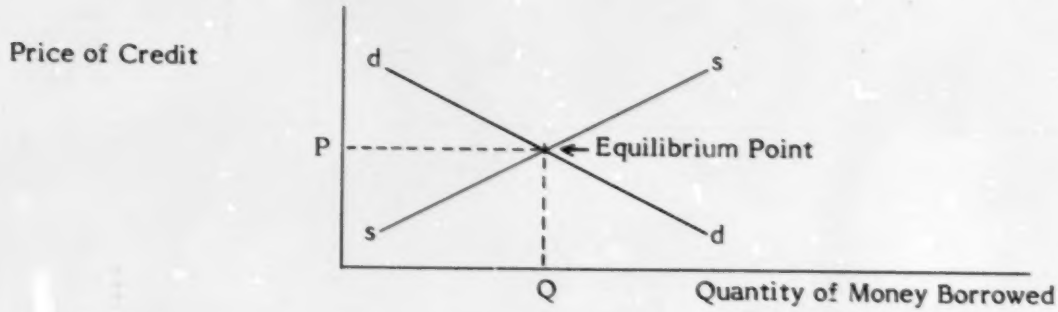
So, why do banks loan money? Banks lend money so they can charge the borrower interest for the use of the money and, therefore, make a profit. Remember, banks are a business. Businesses only stay in business if they make a profit. One way banks make money is to encourage savings by paying interest. The bank then loans out savings deposits minus reserve requirements to other people and businesses who pay a higher interest rate to the bank. The difference between the two interest rates (minus administrative costs) is profit.

SUPPLY AND DEMAND FOR CREDIT

Banks and others having money to lend expect to be paid for its use. People who save their money at banks also expect to earn something. The amount lenders charge (subject to some restrictions imposed by law) is determined by how much they have to lend and how much the borrowers are willing to pay. That charge, or price for the use of money, is called "interest."

Interest rates increase or decrease with changes in the demand for credit and with changes in the supply of money available for lending.

Below you see a supply and demand graph for credit. Along one axis you see the "interest rate" or the price of credit. Along the other axis you see the "total amount of credit" or the quantity of money borrowed. You can find the price of credit and the quantity of money borrowed by finding where the supply and demand curves intersect. This is the equilibrium point.



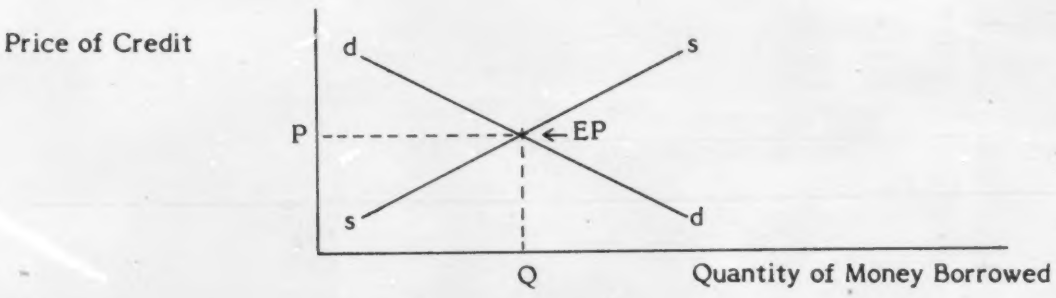
Demand for Credit: The amount of money borrowers will want to borrow at each interest rate. As the interest rate falls, will borrowers wish to borrow more or less money?

Supply of Credit: The amount of money lenders will want to loan at each interest rate. As the interest rate falls will lenders wish to lend more or less money?

APPLICATION LESSON: SUPPLY AND DEMAND FOR CREDIT

Case #1. If consumers and business people became convinced that America was going into a prosperous decade of growth, they would want to borrow more money.

1. The supply of/demand for credit would increase/decrease. (Circle one from each pair.)
2. The supply/demand curve for credit would shift to the right/left. (Circle one from each pair.)
3. Indicate the shift in the appropriate curve on the graph below.



4. Label the new equilibrium point "EP."
5. Label the new interest rate "P_2."
6. Label the new quantity of money borrowed "Q_2."
7. Did the interest rate go up or down?

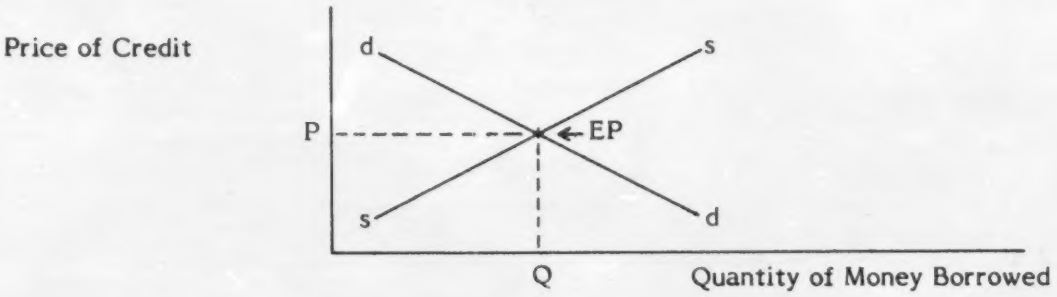
Case #2. People become convinced that banks are unsafe and begin putting all their savings into shoe boxes under their beds. Some people even take their money out of the bank and hide it in hollow trees.

1. The supply of/demand for credit would increase/decrease. (Circle one from each pair.)

SUPPLY AND DEMAND FOR CREDIT

2. The supply/demand curve for credit would shift to the right/left. (Circle one from each pair.)

3. Indicate the shift in the appropriate curve on the graph below.



4. Label the new equilibrium point "EP."

5. Label the new interest rate "P_2."

6. Label the new quantity of money borrowed "Q_2."

7. Did the interest rate go up or down?

In summary, interest rates increase or decrease with changes in the demand for credit and in the supply of money available to borrow. For example, when borrower-demand increases, interest rates tend to go up; when demand decreases, interest rates tend to go down (other factors remaining constant). Similarly, when lenders' supplies of money increase, interest rates tend to decline; when supplies decrease, rates tend to go up (other factors remaining constant). Thus, the price of credit—interest—like the price of commodities, changes with supply and demand.

Classroom Community **Certificate Note**

I.O.U. _____

Plus 10% Interest

Date _____

Loan Contract

I.O.U.

$100

Plus 3% Interest

Signed _____
Student's Name

Loan Contract

I.O.U.

$500

Plus 3% Interest

Signed _____
Student's Name

Loan Contract

I.O.U.

$1000

Plus 3% Interest

Signed _____
Student's Name

MONETARY POLICY . . . REGULATING THE MONEY SUPPLY*

Federal Reserve monetary policy influences bank lending — and thus our money supply — by influencing the reserves of commercial banks. The Fed does this in three ways.

Reserve Requirements:

First, the Fed determines the percentage of deposits that member banks are required to set aside as reserves with their district Federal Reserve Bank.

If banks are permitted to maintain a smaller percentage of their deposits as reserves, it means that fewer reserve dollars are required and more dollars are available for loans.

If, on the other hand, banks are required to increase the percentage of reserves, it means that more reserve dollars are required and fewer dollars are available for loans.

We have seen that loans affect the amount of checkbook money and that the amount of checkbook money affects the size of the money supply. An increase in bank loans (as a result of a lower reserve requirement) will mean an increase in the money supply. A decrease in bank loans (as a result of a higher reserve requirement) will mean a decrease in the money supply.

The Discount Rate:

Second, each Reserve Bank can lend funds to member banks. It usually grants short-term loans to banks faced with temporary or unusual demands for money (loans and withdrawals). The Federal Reserve determines the discount (interest) rate which banks must pay for such loans.

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*Adapted from Your Money and the Federal Reserve System, Federal Reserve Bank of Minneapolis, 1976.

If the discount rate is raised, the higher cost of borrowing from the Fed may cause banks to be more selective and grant fewer loans. Thus, less money is created. If the discount rate is lowered, banks may be willing to grant more loans because of the lower cost of borrowing. More money will be created.

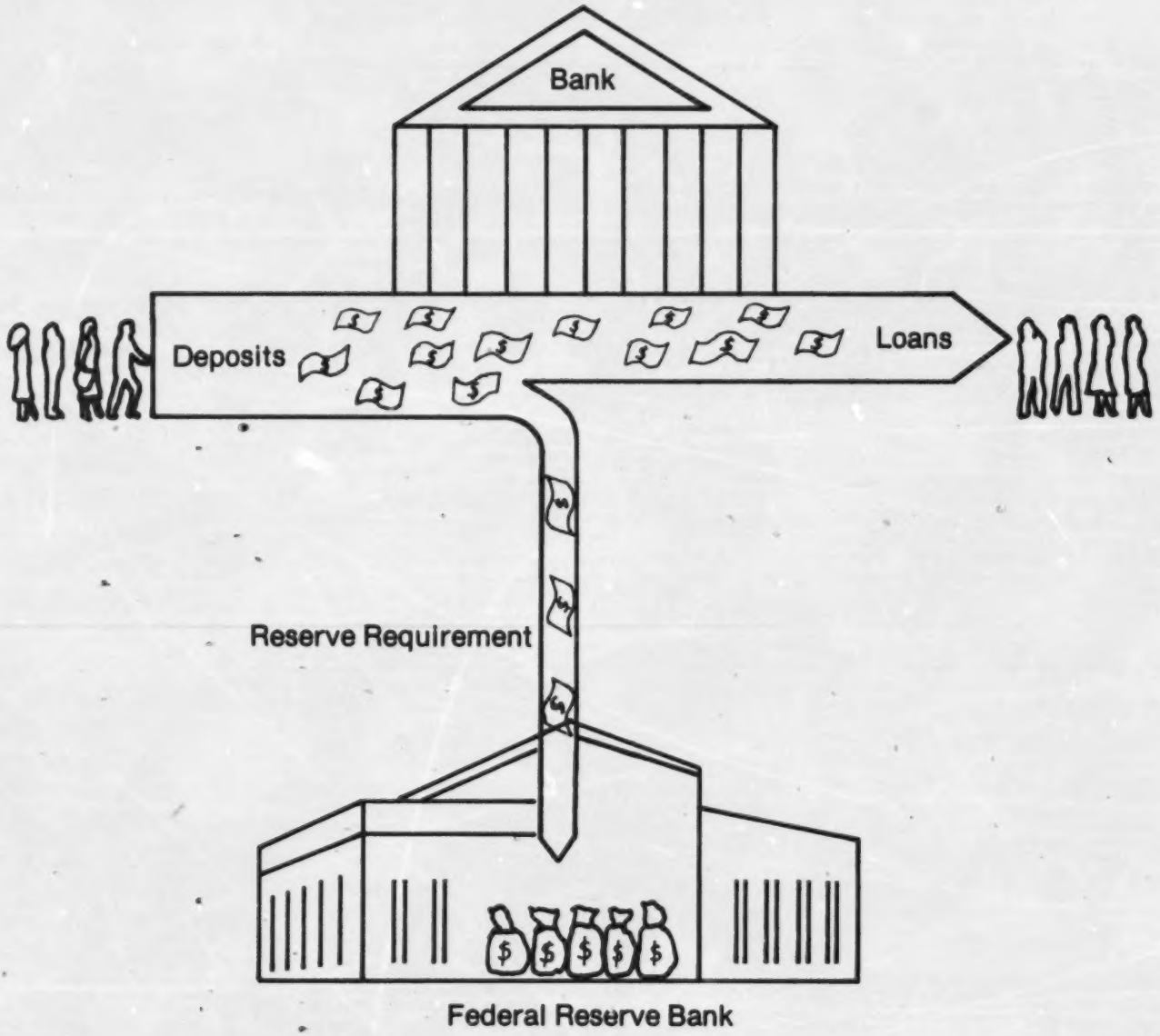
Open Market Operations:

To lower the level of bank reserves, the Federal Reserve sells government securities that it owns, normally to established security dealers. Dealers pay for securities with checks drawn on commercial banks. To collect these checks, the Federal Reserve charges the reserve accounts of the banks. This reduces reserves in the banking system.

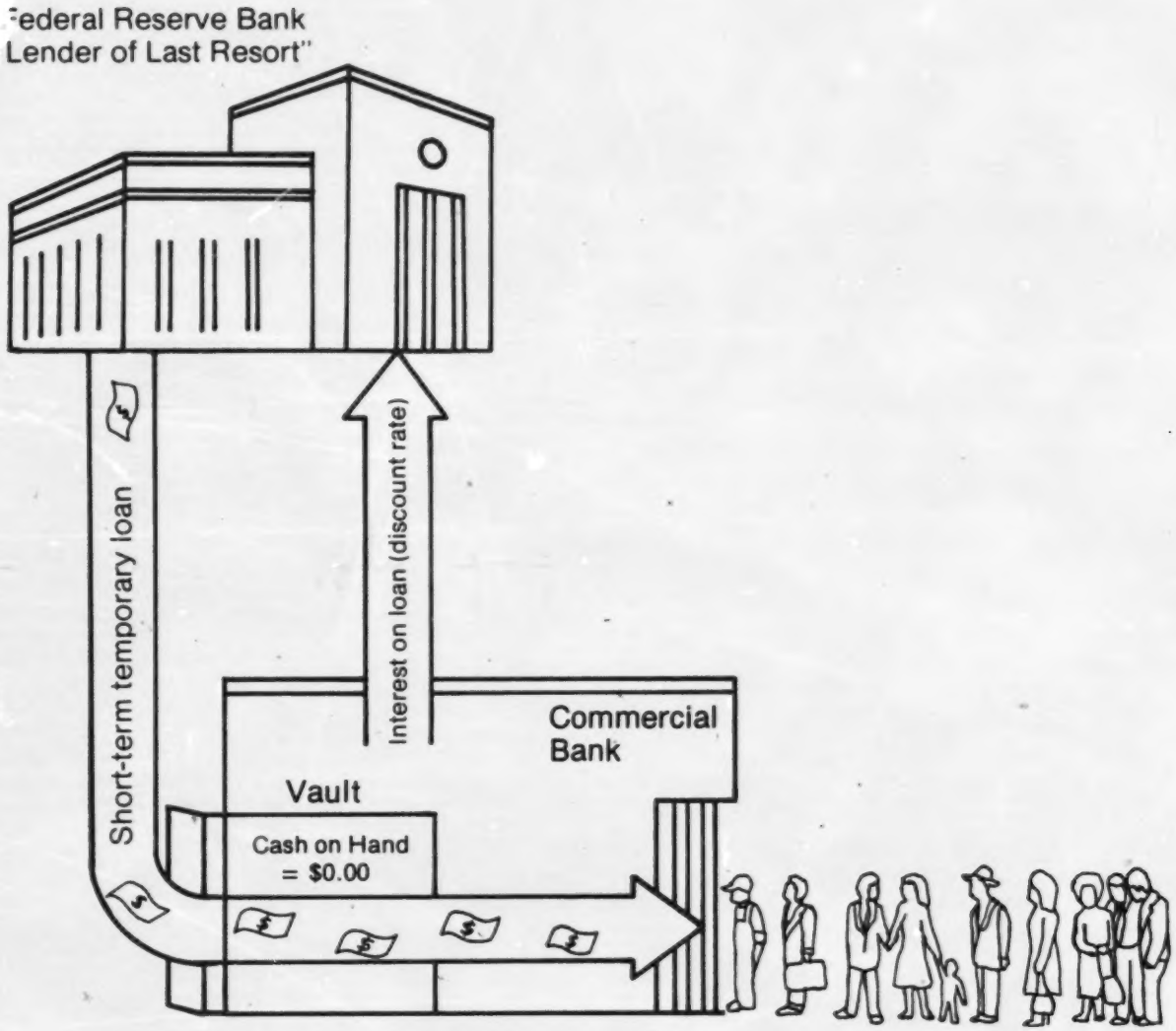
If the Federal Reserve wishes to increase bank reserves, it buys government securities and gives Federal Reserve checks to sellers. Sellers deposit these checks in their banks which in turn deposit the checks with the Federal Reserve. To pay the checks, the Federal Reserve increases the reserve accounts of depositing banks. Thus, reserves in the banking system are increased.

The Federal Open Market Committee sets guidelines and objectives for open market operations. Actual day-to-day purchases or sales of securities are made through the Federal Reserve Bank of New York.

Reserve Requirements



Discount Rate

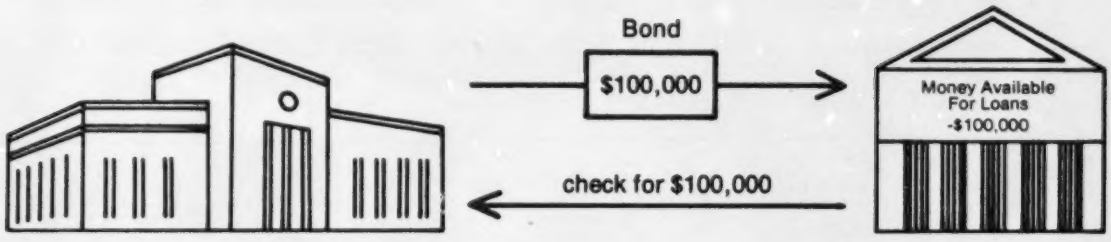


Fed Raises Discount Rate:
Signals Restrictive Monetary Policy

Fed Lowers Discount Rate:
Signals Expansionary Monetary Policy

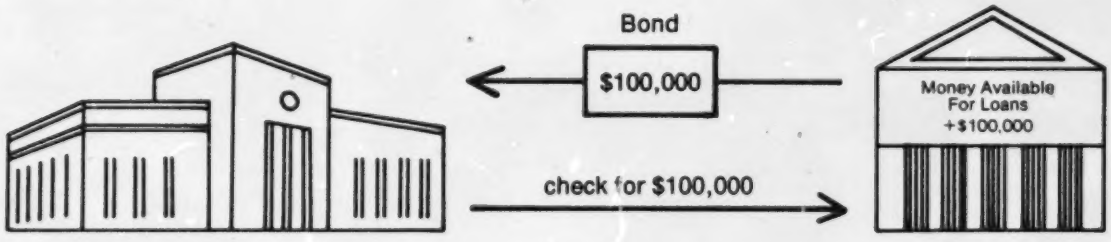
Open Market Operations

Sell Government Bonds



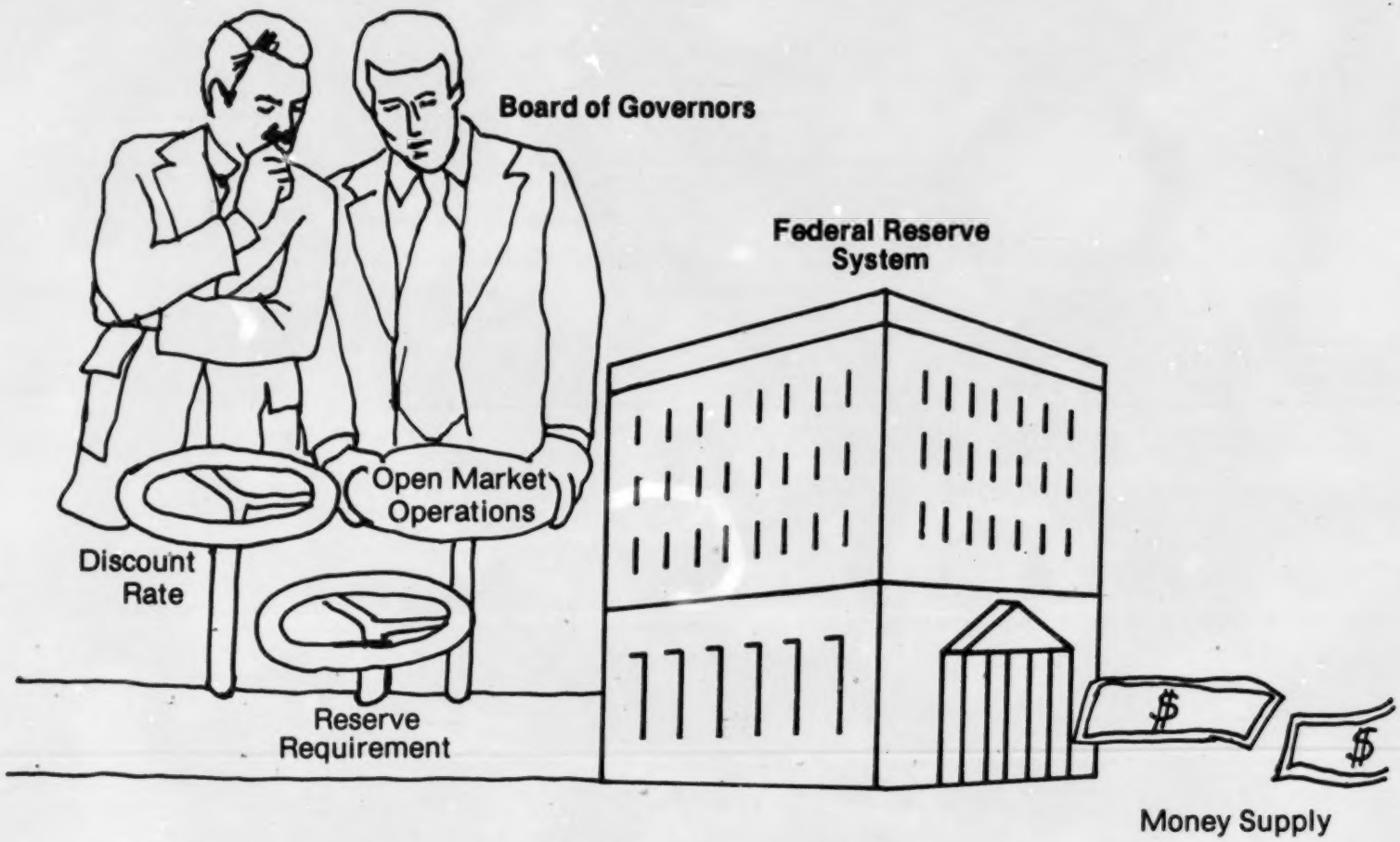
Fewer Loans
Decrease in M_S

Buy Government Bonds



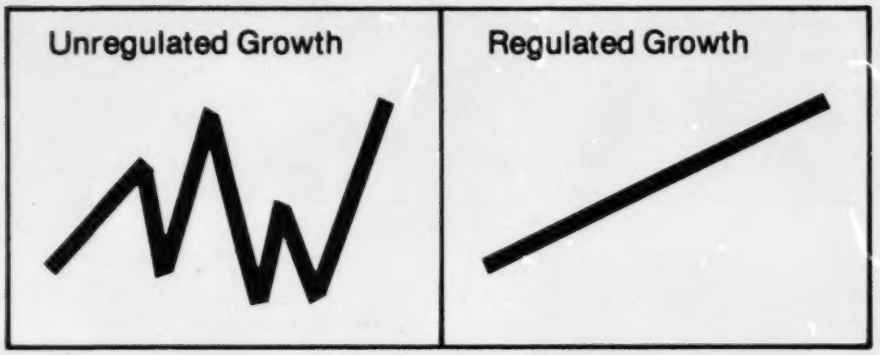
More Loans
Increase in M_S

Monetary Policy



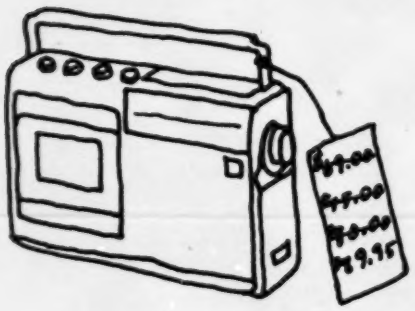
Goals of Monetary Policy

STEADY ECONOMIC GROWTH

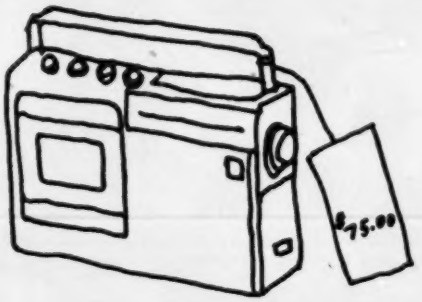


PRICE STABILITY

Inflated Prices



Stable Prices



HIGH EMPLOYMENT

Unemployment

People Working

Monetary and Fiscal Policy

Both monetary and fiscal policy can be used to help fight the common economic problems of INFLATION and RECESSION. As a class, discuss which policy in each of the pairs below would be more effective in achieving the desired goals.

Monetary Policy	Fight Inflation	Stop a Recession
a) Increase reserve requirements b) Decrease reserve requirements		
a) Buy government securities b) Sell government securities		
a) Lower the discount rate b) Raise the discount rate		

Fiscal Policy		
a) Increase government spending b) Reduce government spending		
a) Raise taxes b) Lower taxes		

THE FEDERAL OPEN MARKET COMMITTEE*

As central bank, the Federal Reserve System manages the money supply of the U.S. by influencing the lending activity of commercial banks, which in turn affects the level of spending and production in our economy. This is called monetary policy.

When banks make more or fewer loans, they affect the amount of spendable money we all have; thus the Federal Reserve System's influence on bank lending is an important tool of monetary policy.

Each month, the 12 presidents of the regional Reserve Banks meet with the Board of Governors to discuss monetary policy. Five of the presidents, who serve on a rotating basis, and the seven members of the Board of Governors, constitute the Federal Open Market Committee (FOMC) which is the policy-making body that sets guidelines for managing the availability of money and credit on a day-to-day basis.

By stimulating or discouraging demand for goods and services, the FOMC can moderate the degree of inflation or recession in our economy. For example, if inflation threatens, the FOMC can follow a "restrictive" monetary policy which will make it harder for consumers, businesses, and governments to borrow money to buy more goods and services. This action lessens the demand for goods and thereby lessens inflationary pressure on prices.

On the other hand, if the economy is in a recession, the FOMC may act to increase the money supply—to increase demand and thus stimulate the economy.

Developing monetary policy is an ongoing process. It requires continuous monitoring of the economy. Each month when the FOMC meets, members examine such factors as the level of unemployment, the rate of inflation, interest rates, the levels of

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*Adapted from Your Money and the Federal Reserve System, Federal Reserve Bank of Minneapolis, 1976.

THE FEDERAL OPEN MARKET COMMITTEE

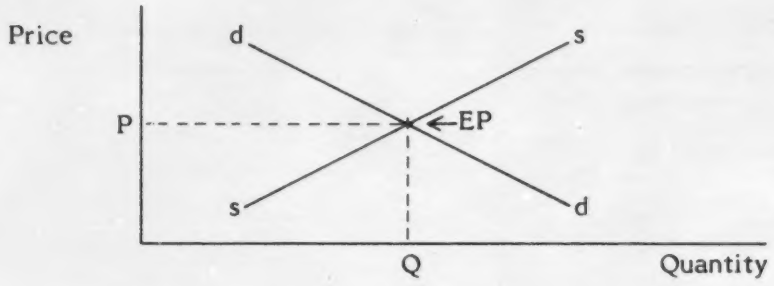
bank reserves and bank borrowings, the overall money supply, and current saving and spending. They also look at international trade and international money flows and exchange rates. After this review, FOMC members decide the best monetary policy to follow to improve the strength and efficiency of our economy.

This ongoing process is repeated every four weeks and is directed toward four main objectives: FULL EMPLOYMENT, ECONOMIC GROWTH, STABLE PRICES, and a satisfactory BALANCE OF PAYMENTS in our international trade. Understandably, monetary policy cannot serve all of these objectives at the same time, and sometimes hard choices and compromises must be made. Nevertheless, FOMC members strive to set policy that will help achieve these combined objectives.

APPLICATION LESSON: FOMC AND MONETARY POLICY

If inflation threatens, the Federal Open Market Committee can follow a "restrictive" monetary policy reducing the supply of money. The effects a restrictive monetary policy have upon prices can be shown on a graph. The graph below shows the demand for goods and services that all consumers have. It also shows the supply of goods and services that all producers have. (This is greatly oversimplified, but it will help to make a point.)

Graph 1: Supply and Demand for All Goods and Services



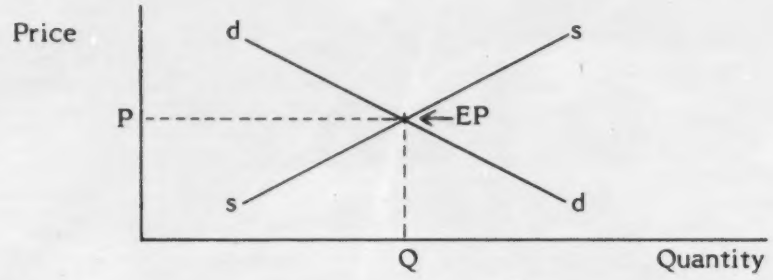
During a period of inflation consumers may have too much money. Buyers compete to purchase goods and services and thus raise prices. Show the increase in demand by shifting the demand curve on graph 1.

What happens to price? Goes up/goes down/stays the same.

Because inflation hurts many people in our society, the Federal Open Market Committee can follow a "restrictive" monetary policy which will make it harder for consumers, businesses, and governments to borrow money to buy more goods and services. By reducing the amount of money loaned, the Federal Reserve reduces the amount of money consumers can spend. Show this reduction in consumer demand by shifting the demand curve on graph 2.

FOMC AND MONETARY POLICY

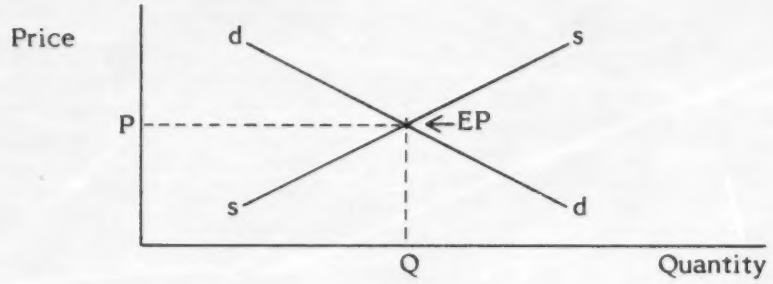
Graph 2: Supply and Demand for All Goods and Services



When the supply of money is reduced, consumer demand is reduced. This causes the price of goods and services to go down or stabilize.

If consumers are not purchasing enough goods and services, the economy goes into a recession and people are laid off their jobs. To fight a recession, the Federal Reserve can increase the money supply by making more money available for loans. As more money is made available to consumers, the demand for goods and services will go up/go down/stay the same. Show the shift in the demand curve on graph 3.

Graph 3: Supply and Demand for All Goods and Services



As consumer demand increases and prices rise, suppliers will be willing to produce more products and hire back laid-off employees. Theoretically, a new equilibrium point will be achieved which will better reflect our society's national economic goals.

WORKSHEET: WHAT WOULD YOU DO?

Situation #1

What if your weekly allowance included the money you had to spend each day to purchase a school lunch, and the price just went up from 75¢ to 85¢? What would you do?

a. Buy school lunches only four days a week and bring a bag lunch one day a week.

b. Continue buying the school lunch every day but spend 50¢ less on other things each week.

c. Continue buying the school lunch every day but save 50¢ less each week for future spending.

d. Offer to take on extra chores at home in order to earn a higher allowance.

e. Ask for a 50¢ increase in your allowance to cover the increase in the price of a school lunch.

Situation #2

What if you worked part-time three afternoons a week and Saturdays to earn spending money and to save $10 a week. Lately, your expenses have gone up, but not because you are buying more. Prices have just increased (movie admissions, gasoline, school supplies, hamburgers, malts). You cannot continue buying what you once did and still save $10 a week. What would you do?

a. Buy fewer of the same goods and services (go to fewer movies, drive less, use less paper, eat fewer hamburgers and malts).

b. Substitute cheaper items for the ones you previously purchased (go to less expensive theatres, buy cheaper gasoline, eat french fries and drink cokes).

c. Save less than $10 a week.

d. Work more hours to increase earnings so you can continue your previous spending and savings habits.

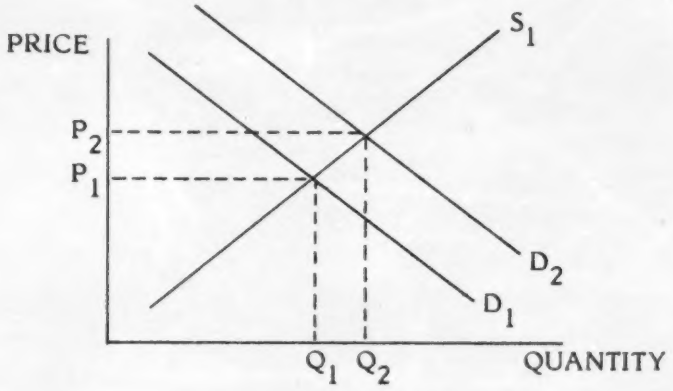
e. Ask your employer for a raise, or look for a new job that pays more.

WHY EXPANSIONARY POLICIES DON'T ALWAYS WORK

In Activity 5, Graph 3 showed how an increase in the demand for goods and services causes prices to rise.

Expansionary monetary and fiscal policies are thought to work because they raise prices. When the government wants to stimulate the economy, it makes more money available and thus increases the demand (and spending) for goods and services in the economy. In the graph below, this is shown by shifting the demand curve to the right. As the demand curve shifts from D_1 to D_2, prices rise from P_1 to P_2.

Graph 1: Supply and Demand for All Goods and Services

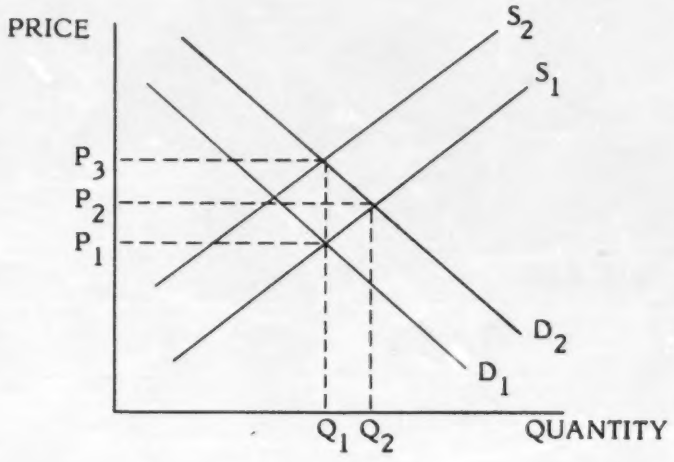


This increase in prices causes new profit opportunities for businesses. To sell more products and services at the higher prices (and to make more money), businesses increase their production. They might also invest in new buildings, machinery, and tools so that they can produce more. All of this new activity causes the economy to grow. So after the increase in demand, prices are higher (P_2) and the quantity of goods and services produced is greater (Q_2). These are the results that Congress wants when it lowers taxes, increases the federal debt, or adopts other expansionary policies.

WHY EXPANSIONARY POLICIES DON'T ALWAYS WORK

However, these results are only temporary. As you saw in Activity 6, individuals feel the effects of inflation on their incomes. When the government makes prices rise, people try to protect the purchasing power of their incomes. They do this by asking for higher wages, looking for better-paying jobs, or even refusing to work unless they receive more money. When they do this, the number of people available to do the nation's work decreases--and the total number of goods and services drops. This situation is shown on the graph below by a shift in the supply curve from S_1 to S_2. The total number of goods and services drops back to Q_1. And as the cost of doing business increases because workers must be paid more, businesses have to raise their prices to P_3.

Graph 2: Supply and Demand for All Goods and Services



Graph 2, then, shows what happens when the government uses expansionary policies. In the long run, such policies do not affect the total number of goods and services--this number changes from Q_1 to Q_2 and then back to Q_1 again. But expansionary policies do raise prices. In the long run, they simply make inflation worse.

Expansionary policies often fail because people <u>know</u> that these policies are going to cause more inflation. When people expect higher inflation, they try to protect themselves from it. And when people try to protect themselves from inflation, government actions cannot make the economy grow.

1. We know money has a price because:

   a. People pay to borrow it.
   b. People are paid to save it.
   c. Banks make a profit.
   d. All of the above

2. The demand for money:

   a. Is the amount of money borrowers want to borrow at each interest rate.
   b. Is the amount of money lenders want to lend at each interest rate.
   c. Increases as the interest rate goes up.
   d. Is not dependent on the opinions and feelings of the American people.

3. Which of the following best describes inflation:

   a. Unemployment
   b. Shortages of goods and services
   c. Rising prices
   d. Not enough money

4. The reserve requirement, discount rate, and open market operations are all used by:

   a. Commercial banks to increase profits.
   b. The Federal Government to regulate banking.
   c. The President and Board of Governors to reduce spending.
   d. The Federal Reserve System to influence bank reserves and the money supply.

5. The discount rate is the price:

   a. Consumers pay for money.
   b. Banks pay to borrow money from the Federal Reserve.
   c. The Federal Reserve System pays for money.
   d. All of the above

6. When the Federal Reserve System buys government securities from a commercial bank:

   a. The money supply is increased.
   b. Bank reserves are decreased.
   c. Fewer loans can be made.
   d. All of the above

7. All of the following are "expansionist" policies except:

   a. The reserve requirement is lowered.
   b. The discount rate is lowered.
   c. The income tax rate is raised.
   d. Government securities are purchased by the Fed.

8. Which of the following should help stop a recession?

   a. The Fed raises the discount rate.
   b. The Fed sells government securities.
   c. The Fed lowers the reserve requirement.
   d. The government decreases spending.

9. A "restrictive" monetary policy will:

   a. Make it easier to borrow.
   b. Encourage bank lending.
   c. Discourage consumer spending.
   d. Stop a recession.

10. All of the following are goals of monetary policy except:

   a. Economic growth
   b. Trade limitations
   c. Stable prices
   d. Full employment